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Newark, N.J.
Public...

Board of Street and Water Commissioners

CITY OF NEWARK, N. J.

ANNUAL REPORT

OF THE

Board of Street and Water Commissioners

OF THE

CITY OF NEWARK, NEW JERSEY.

FOR THE YEAR ENDING DECEMBER 31, 1905.

OFFICERS AND MEMBERS.

PRESIDENT.....A. F. EGGERS, 21 S. 10th St.

COUNSEL OF THE BOARD.....JOS. COULT, 58 Mt. Pleasant Ave.

CLERK OF THE BOARD.....WM. E. GREATHEAD, 1092 Broad St.

CHIEF ENGINEER.....MORRIS R. SHERRERD, 938 Broad St.

GENERAL SUP'T OF WORKS..CHAS. M. SHIPMAN, 106 Lincoln Ave.

ENGINEER AND SUP'T. DEPT. WATER ....GEO. SANZENBACHER, 276 S. 6th St.

ENGINEER DEPT. STREETS AND HIGHWAYS. } LOUIS C. DITTLER, 130 Seymour Ave.

SEWERS AND DRAINAGE ENGINEER DEPT. } ...EDWARD S. RANKIN, 751 High St.

CASHIER DEPT. OF WATER.....H. D. NORTHROP, 28 Waverly Ave.

COMMISSIONERS.	RESIDENCE.
*GEO. M. BALLARD	29 Milford Ave.
C. V. BAUMANN	385 S. 10th St.
JOS. S. VINSON	277 Walnut St.
GEO. H. PHILLIPS	141 Lincoln Ave.
AUGUSTUS F. EGGERS	21 South 10th St.

*Died December 4th, 1905.

NEWARK, N. J.
BAKER PRINTING CO.,
251 MARKET ST.

1906

To the Board of Street and Water Commissioners of the City of Newark, N. J.

GENTLEMEN:—Herewith are transmitted detailed reports of the several departments under the control of your Board for the year ended December 31st, 1905, which have been arranged for presentation to the Mayor and Common Council of the City in accordance with Section 20 of Chapter 134 of the State Laws of 1891. I have not attempted to analyze these reports or make any specific recommendations at this time, as reports covering most of the important matters considered by the Board have been made from time to time as the occasion seemed to require.

Respectfully submitted,

MORRIS R. SHERRERD,

Chief Engineer.

ANNUAL REPORT

OF THE

General Superintendent of Works.

REPORT OF
General Superintendent of Works.

To the Chief Engineer of the Board of Street and Water Commissioners of the City of Newark, N. J.

DEAR SIR:—In submitting the annual reports for the year 1905 it is proper to state that it has been the effort of this department to see that each paved street in the city was cleaned as often as required; certainly as often as the funds at the disposal of the department would permit.

The following tables show the amount of work done, the total pay rolls and the money expended for supplies.

The purchase of ten horses to replace a like number which are getting too old for work of the departments is recommended; also the purchase of a steam roller and road scarifier, both of which are necessary. Two more sweeping machines are also required to make the street cleaning equipment complete.

I have tried the experiment of cleaning the streets by day instead of at night. This method has worked satisfactorily and given general satisfaction, while at the same time being done at considerable less expense. The only difficulty about this modification in the method of street cleaning occurs at times when a continued drought has made the dirt on the street so dry as to be easily blown about on windy days when disturbed by the sweepers, and if the work of cleaning is progressing after the stores are opened or many pedestrians are upon the streets it then becomes a question as to

the advisability of sweeping. However, the advantage of being able to sweep during daylight is so much better and the efficiency of the work so much greater that I propose to continue this method except on days when the weather conditions are such that it becomes desirable to have the sweeping done before the stores are opened.

An additional stable erected near the center of the city is very necessary. If such a stable were arranged for the use of all the City Departments it would be a considerable saving in expense. A very great saving could be effected by the Street and Sewer Departments, particularly in the time which is now consumed in reaching the southern and eastern portions of the city from the present stable. I would, therefore, recommend that a central location be secured and the construction of such a stable be proceeded with at once.

When the streets of the annexed district are renamed by the Board it will be necessary to expend about a thousand dollars for street signs and the necessary posts.

With the limited funds available the Department was only able to repair four bridges during the year. Most of the twelve canal bridges needed more or less repairs, besides the culverts over streams and ditches, upon which some work had to be done nearly every month.

The block system of cleaning all of the streets of the city has been introduced and fourteen districts have been established with a foreman in charge of each, who is held responsible for the care and condition of the pavements in his district.

It has been decided to procure uniforms for the street cleaning force, and an improvement in the service may be expected from this change.

The following detailed statements are submitted:

DEPARTMENT OF STREETS AND HIGHWAYS, 1905.

	CUBIC YARDS.	MILES.	COST.
Pavements cleaned by sweeping machines	31,192	1,032.01	$21,041.30
Block pavements cleaned by hand	33,060	703.10	33,542.36
Telford pavements cleaned by hand	1,397	23.44	1,016.48
Flushing streets	36	2.64	157.29
Cobble pavements cleaned by hand	3,334	58.98	3,582.24
Bitulithic pavements cleaned by hand	335	29.43	246.21
Asphalt and brick pavements cleaned by hand	17,560	5,425.17	19,690.48
Miscellaneous	220	.....	1,086.96
Removal of snow and ice	93,526	.....	15,353.22
Dirt streets graded and filling depressions	541	.....	1,095.91
Dirt streets graded (machine)	103	29.86	1,444.39
Picking papers (26,948 bags)	.....	.....	2,321.65
City Dumps	.....	.....	1,888.05
Surveyor's labor	.....	.....	557.50
Carpenter and helper	.....	.....	954.10
Detail for cleaning intersections	1,348	.....	2,916.83
Cobble pavements repaired, 53 places	.....	.....	239.23
Block pavements repaired, 1,069 places	.....	.....	6,667.86
Brick pavements repaired, 35 places	.....	.....	247.25
Bitulithic pavements repaired, 1 place	.....	.....	12.70
Telford pavements repaired, 13 places	.....	.....	340.20
Placing signs at street corners	.....	.....	305.00
Stable help	.....	.....	650.82
Inspectors on conduits, etc	.....	.....	1,208.50
Special foremen and laborers	.....	.....	3,861.00
Garbage Inspectors	.....	.....	3,617.00
Telford Repairs, viz.:			
Lyons avenue	.....	.....	58.45
South Orange avenue	.....	.....	267.17
Ogden street	.....	.....	19.33
High street	.....	.....	79.67
Hawthorne avenue	.....	.....	292.76
Vroom alley	.....	.....	1.61
Weekly salaries, clerical force, &c	.....	.....	29,856.80
Totals	182,652	7,304.63	$154,620.32

Cost of repairing the following Telford paved streets :—

	LABOR	CRUSHED STONE.	TOTAL.
South Orange avenue	$267.17	$246.20	$513.37
Ogden street	10.33	89.00	99.33
Lyons avenue	58.45	204.13	262.58
Hawthorne avenue	202.70	140.75	433.15
High street	76.67	143.75	223.42

RECEIPTS.

Balance 1904	$ 421.30	
Appropriations Tax Ordinance	170,000.00	
Receipts from all other sources	20,685.30	
Total receipts		$191,106.59

DISBURSEMENTS.

Rent, William street office	$210.00	
Telephone, William street office	67.50	
Electric lights, William street office	27.25	
New stoves, William street office	10.00	
Coal, William street office	82.05	
Water, William street office	25.00	
		422.25
Stevens School of Technology	4.50	
Coffee	3.06	
		7.56
Incidentals, City Hall office	$8.85	
Printing	20.00	
Stationery, City Hall office	107.25	
Incidentals, City Hall office, J. F. McCue	15.10	
Telephone tolls, City Hall office	2.20	
		153.40
Glenham	$67.00	
Electrical work	[illegible]	
Typewriting	[illegible]	
Repairs [illegible]	[illegible]	
Electric [illegible]	[illegible]	
Reception [illegible]	[illegible]	
Hose and water [illegible]	[illegible]	
Drain pipe	[illegible]	
City [illegible]	[illegible]	
Street [illegible]	[illegible]	
		1,040.07

Plumbing, City stables	$358.76	
Painting, City stables	45.00	
Soap, City stables	5.33	
Rubber goods, City stables	123.85	
Provender, City stables	7,815.32	
Whitewashing, City stables	100.00	
Coal, City stables	203.50	
Insurance, City stables	114.28	
Gas and electric light, City stables	345.12	
Telephone, City stables	45.00	
Testing scale, City stables	2.00	
Water, City stables	50.00	
Axle grease, City stables	15.47	
Halts. and drugs, City stables	171.07	
Wagons and repairs, City stables	885.70	
Harness and harness fittings, City stables	376.17	
Ice, City stables	10.50	
Glass, City stables	20.30	
		10,687.37
Hardware	$3,000.45	
Horse shoeing	7.68	
Lumber	432.33	
Blacksmithing	287.00	
Horse shoeing	19.50	
Sweepers' repairs	2,312.80	
Sprinklers' repairs	246.75	
Brooms	1,217.60	
Brick, cement and sand	2,602.54	
Paints and oils	212.10	
Tools, etc	407.10	
Street repairs	422.27	
Board for horses	300.00	
Labor of Shanley & Co	1,738.16	
Use of roller	32.50	
Horses	850.00	
Bicycles and repairs	119.25	
Advertising	38.40	
Rent and coal, Bergen street tool house	86.25	
Sundries	96.55	
Refund street opening	97.00	
Canvas bags, suit, etc.	198.96	
Inspectors	691.25	
Professional ex. services	1,085.20	
		16,501.64

Salaries, January	$374.99	
Pay rolls, January	7,681.16	
Salaries, February	374.99	
Pay rolls, February	14,206.81	
Salaries, March	541.65	
Pay rolls, March	10,615.50	
Salaries, April	541.65	
Pay rolls, April	13,709.95	
Salaries, May	541.65	
Pay rolls, May	10,070.94	
Salaries, June	541.65	
Pay rolls, June	12,818.55	
Salaries, July	541.65	
Pay rolls, July	11,120.80	
Salaries, August	541.65	
Pay rolls, August	11,637.60	
Salaries, September	541.65	
Pay rolls, September	16,152.25	
Salaries, October	541.65	
Pay rolls, October	14,958.94	
Salaries, November	541.65	
Pay rolls, November	13,778.06	
Salaries, December	541.85	
Pay rolls, December	17,869.76	
		160,787.00
Total disbursements		$190,041.02
Balance		1,065.57
		$191,106.59

SCAVENGER SERVICE.

Herewith is submitted a report of the scavenger service for the year 1905.

In reviewing the work under the present system, which went into operation on May 1st, 1903, there has been a general improvement, and with the cooperation of the citizens in carrying out the provisions of the ordinances regarding the separation of ashes, garbage and paper the number of complaints has been materially reduced.

It is a matter of congratulation to observe that we had but 99 complaints, against 210 for the previous year, the

majority of which were received during the heavy snow-storms of last winter.

During the past few months special effort has been made to have ashes, refuse and other matter collected on the principal streets, especially Broad and Market streets, prior to 9 A. M., and it has given general satisfaction, not only to the business people, but to the public at large

One of the most perplexing problems confronting this Department is the paper, litter, etc., thrown by pedestrians and storekeepers into the public streets, particularly in the business sections. This department is more or less blamed for the continuance of this nuisance, but the proper remedy seems to be the strict enforcement of the city ordinances by the police.

Herewith is given the cubic yards of ashes, etc., tons of garbage and paper collected during the year.

	ASHES AND RUBBISH MATERIAL.	GARBAGE.	PAPER.
January	32,140 cubic yards.	1,175 tons.	19,742 lbs.
February	31,415 " "	1,160 "	21,472 "
March	30,010 " "	1,097 "	24,811 "
April	26,625 " "	1,193 "	28,500 "
May	25,150 " "	1,156 "	29,750 "
June	24,805 " "	1,540 "	26,150 "
July	23,450 " "	1,637 "	25,462 "
August	23,216 " "	1,850 "	23,170 "
September	26,325 " "	2,015 "	25,460 "
October	29,005 " "	1,748 "	22,182 "
November	29,745 " "	1,325 "	18,476 "
December	31,860 " "	1,182 "	17,580 "
Total	333,746 " "	17,078 "	282,755 "

of paper or 141 $\frac{755}{2000}$ tons.

DISTRIBUTION OF PAY ROLLS.
SCAVENGER.

	INSPECTORS.	TOTALS.
January	$346.00	$346.00
February	346.00	346.00

	Inspectors	Totals
March	[illegible]	[illegible]
April	[illegible]	[illegible]
May	[illegible]	[illegible]
June	[illegible]	[illegible]
July	[illegible]	[illegible]
August	[illegible]	[illegible]
September	[illegible]	[illegible]
October	[illegible]	[illegible]
November	[illegible]	[illegible]
December	[illegible]	[illegible]
Totals	[illegible]	[illegible]

STREET REPAIRS

	General Repairs	Spot Repairs	Cost
January			[illegible]
February			[illegible]
March	[illegible]		[illegible]
April	[illegible]	[illegible]	[illegible]
May	[illegible]	[illegible]	[illegible]
June	[illegible]	[illegible]	[illegible]
July	[illegible]	[illegible]	[illegible]
August	[illegible]	[illegible]	[illegible]
September	[illegible]	[illegible]	[illegible]
October	[illegible]	[illegible]	[illegible]
November	[illegible]	[illegible]	[illegible]
December	[illegible]	[illegible]	[illegible]
Totals	[illegible]	[illegible]	[illegible]

Street [illegible]	[illegible]
Complaints made to the inspector of streets [illegible]	[illegible]
Number of the inspector [illegible] sidewalks [illegible] streets [illegible]	[illegible]
Number of the inspector [illegible]	[illegible]
Expense [illegible]	[illegible]

[illegible]

work for this office, as well as many complaints from the Fire Department. Many builders persist in blocking the gutters, preventing the free flow of rain water, thus creating a nuisance in the neighborhood. Adoption of more drastic requirements in the ordinance on the subject is recommended. An effort has been made to clear the sidewalks from obstructions. Broad and Market streets, Springfield and Belleville avenues have been reasonably cleared, and this work will also be pushed in other parts of the city.

The appointment of an additional Inspector of obstructions on streets is recommended; there is only one at present, and he is unable to cover the entire city, make the necessary examinations and serve notices.

The following table shows the repairs to asphalt streets:

	NO. YDS.	NO. YDS.	TOTAL NO. YARDS.
Barclay street	200.72	14.33	215.05
Bank street	40.29	1.75	42.04
Broad street	805.21	8.66	813.86
Bruce street	29.58	2.41	31.99
Camden street	.....	1.29	1.29
Canal street	177.51	372.01	549.52
Camp street	212.49	.....	212.49
Clinton street	23.54	50.34	73.88
Cedar street	1.57	7.88	9.45
Clinton avenue	105.84	52.52	158.36
Chestnut street	.....	1.96	1.96
Crane street	3.88	.....	3.88
Court street	195.91	78.71	274.62
East Park street	146.61	.....	146.61
Elizabeth avenue	43.15	1,108.90	1,152.05
Elm street	.78	16.92	17.70
Franklin street	.....	2.52	2.52
Fourth street	5.50	.....	5.50
Fulton street	13.77	1.40	15.17
Garside street	.....	8.39	8.39
Gouverneur street	3.33	.....	3.33
Grant street	.....	10.86	10.86
Gould avenue	177.63	1.19	178.82
Halsey street	347.12	38.07	385.20

	NO. YDS.	NO YDS.	TOTAL NO.
Harvey street	129.91	.....	129.91
Humboldt street	.....	2.07	2.07
Holland street	11.68	.....	11.68
James street	3.00	.....	3.00
John street	2.22	.....	2.22
Littleton avenue	108.34	5.73	114.07
Lafayette street	169.07	21.49	190.56
Linden street	.....	7.39	7.39
Lincoln Park	8.94	1.72	10.66
Lincoln avenue	2.83	.....	2.83
Mt. Prospect avenue	66.26	.....	66.26
Monmouth street	10.22	5.83	16.05
*Morris avenue (walk)	.....	85.94	85.94
Newton street	16.32	19.35	35.67
Ninth avenue	13.70	.....	13.70
North Sixth street	55.77	14.19	69.96
North Seventh street	61.58	5.08	66.66
Nursery street	5.44	10.61	16.05
New street	221.04	11.96	233.00
*Ogden street	775.53	.....	775.53
Orchard street	337.79	9.94	347.73
Oriental street	39.73	43.59	83.32
Pennington street	.....	9.00	9.00
Parker street	.....	2.89	2.89
Park place	712.50	4.39	716.89
Pennsylvania avenue	35.93	43.66	79.59
Quitman street	.....	47.74	47.74
Sherman avenue	22.90	13.63	36.53
South street	41.21	116.77	157.98
Summer avenue	192.48	2.00	194.48
State street	3.61	.....	3.61
South 6th street	239.76	30.95	270.71
South 7th street	348.97	176.10	525.07
South 8th street	137.79	7.75	145.54
Summit street	5.00	1.11	6.11
Somerset street	57.37	13.72	71.09
Warren street	6.64	.....	6.64
Wallace street	92.28	24.49	116.77
Washington street	321.56	26.53	348.09
Washington place	208.63	.....	208.63
Walnut street		5.11	5.11
Wavecrest avenue	33.73		33.73
Wright street	4.03		4.03

	NO. YDS.	NO. YDS.	TOTAL NO. YDS.
Wakeman avenue	.....	2.97	2.97
Thirteenth street	19.50	.....	19.50
Third street	9.67	.....	9.67
Third avenue	.....	39.40	39.40
Tichenor street	14.43	.....	14.43
Totals	7,082.39	2,593.21	9,675.60
Cost			$6,373.61

*This pavement bituminous macadam.

REPAIRS TO ASPHALT STREETS.

RECEIPTS.

Balance—1904	$16,297.06	
All other sources	12,499.46	
Totals		$28,796.52

DISBURSEMENTS.

Repair scale	$ 6.75	
Brooms	1.20	
Oils	291.50	
Wagons and repairs	451.68	
Wood and coal	1,354.62	
Cement	289.04	
Hardware	46.24	
Pavement repairs, maintenance, etc	16,150.23	
Tools	26.00	
Bicycle repairs	20.00	
Plumbing	11.85	
Carting	79.70	
Inspectors	185.50	
Refund, street opening	30.00	
Board of horses	300.00	
Sundries	20.28	
		19,264.59
Pay Rolls, January	$ 241.05	
" " February	110.37	
" " March	348.07	
" " April	559.19	
" " May	590.40	
" " June	764.88	
" " July	608.12	

Pay Rolls, August	$488.25	
" " September	692.15	
" " October	631.00	
" " November	759.60	
" " December	580.53	
		6,373.61
Balance		3,158.32
Total		$28,796.52

DISTRIBUTION OF PAY ROLLS.
REPAIRS TO ASPHALT STREETS.

	Foremen.	Laborers.	Drivers.	Horse and Wagon hire.	Totals.
January	$72.00	$199.20	$26.22	.....	$297.42
February	72.00	.....	....	.....	72.00
March	72.00	229.55	28.52	.....	330.07
April	90.00	537.75	57.27	$4.32	689.34
May	72.00	444.20	45.74	39.78	601.72
June	72.00	447.00	42.09	62.22	623.31
July	90.00	387.35	86.16	158.86	722.37
August	72.00	310.00	46.25	80.00	508.25
September	90.00	494.05	57.00	76.00	717.05
October	72.00	522.15	49.00	19.25	662.40
November	72.00	451.90	45.25	.....	569.15
December	90.00	403.30	48.50	38.73	580.53
Totals	$936.00	$4,426.45	$532.00	$479.16	$6,373.61

DEPARTMENT OF SEWERS AND DRAINAGE, 1905.

	LOADS.	COST.
Basins cleaned (4,241)	7,121	$7,578.65
Sewers cleaned (174,785 feet)	1,119	6,014.00
Chambers cleaned at Pumping Station	2,410	584.50
Ditches cleaned (929,550 feet)	75	1,360.60
Pumps cleaned	57	185.00
Repairs at Pumping Station		140.45
Basins repaired (98)		750.25
General repairs		255.50
Removing snow from basins		986.50
Sheathing ditches		174.25
Detailed men examining sewers and basins		1,848.77
Surveyor's helpers		653.75
Carpenters and helpers		642.00

Inspecting sewers for repairs	$304.50
Raising manholes	130.25
Building manholes (6)	235.60
Moving basin heads	5.25
Building basins (14)	608.30
Repairing inverts	6.25
Shifting basins	25.25
Cleaning basin connections	26.15
Placing new manhole heads on sewers (28)	104.25
Repairing culverts	54.00
Cleaning culverts	83.75
Repairing floor of Walnut Street Bath House	6.25
Lowering and shifting manholes	30.00
Cutting weeds at Peddie Canal	35.50
Dredging Peddie Canal	1,109.75
Leveling bank at Peddie Canal	56.50
Laying box drains	24.50
Laying drain pipe	14.80
Painting dredger	8.75
Rebuilding City Stables, wall	6.25
Rebuilding old manholes	45.25
Painting and repairing General Supt's office	34.75
Miscellaneous	113.02
Sewer Repairs, viz.:—	
Sixteenth avenue	26.25
South 14th street	14.00
Springfield avenue	663.75
Springfield avenue (repaving over sewer)	165.86
81-83 Market street	3.00
Halsey street	3.25
High street	3.00
Elizabeth avenue	32.25
Miscellaneous small sewers	8.00
1130 Broad street	8.50
Bruen street	5.25
South Orange avenue	39.00
Chestnut and Pacific streets	1.00
58 Congress street	30.35
62 Congress street	29.25
Maple and South Orange avenue	7.50
Lang street and New York avenue	7.00
99 Congress street	39.45
Building pipe sewer, 6th street and 4th avenue	93.00
Rebuilding Tenth Ward sewer	80.75

Park avenue and South Eleventh street	$78.75
Waverly avenue and Quitman street	4.00
Fourteenth avenue and South Eleventh street	43.50
West Kinney street	25.00
Bank street	7.50
Repairing road at Pumping Station	25.75
Painting carts	46.75
Weekly salaries	14,323.32
Total pay rolls	$40,057.97

SEWERS AND DRAINAGE

RECEIPTS

Balance 1904	$ 778.54
Appropriation Tax Ordinance	45,000.00
From all other sources	20,121.09
Total receipts	$65,899.63

DISBURSEMENTS

[illegible] (Mr. Broadwell)	$ [illegible]	
Robbins [illegible]	455.30	
[illegible]	100.00	
[illegible]	51.25	
[illegible]	180.00	
[illegible]	[illegible]	
		$[illegible]
[illegible] office	[illegible]	
[illegible]	[illegible]	
		158.00
Kent [illegible] Street office	180.00	
[illegible] Street office	[illegible]	
		200.10
[illegible]	[illegible]	
[illegible]	3,800.00	
[illegible]	5.00	
[illegible]	[illegible]	
[illegible]	[illegible]	
[illegible]	27.50	
[illegible]	[illegible]	
[illegible]	[illegible]	
[illegible]	[illegible]	
[illegible]	[illegible]	
[illegible]	[illegible]	

Freight	$6.65	
Use of boat	10.00	
Paints, oils and disinfectants	306.81	
Street repairs	271.43	
		$7,913.33
Testing scale, Pumping Station	4.00	
Electrical works, Pumping Station	15.30	
Ice, Pumping Station	22.48	
Water, Pumping Station	50.00	
Coal, Pumping Station	3,014.48	
Plumbing, Pumping Station	68.95	
Electric lighting, Pumping Station	226.23	
Telephone, Pumping Station	85.70	
Telemeter charts, Pumping Station	7.50	
Machinery repairs, Pumping Station	375.93	
Oils, Pumping Station	55.20	
Hardware, Pumping Station	22.10	
Insurance, Pumping Station	93.75	
		4,041.62
Drain pipe	357.04	
Water	691.06	
Man hole, basin heads, etc	963.95	
Refund sewer tops	260.00	
Professional services	7.00	
Special services (Inspector)	200.00	
Horses	625.00	
Provender	61.76	
Maintenance—Joint Outlet sewer	2,628.29	
Iron beams	72.25	
Sundries	83.83	
		5,950.18
Salaries, January	225.00	
Pay rolls, January	1,956.26	
Salaries, February	241.66	
Pay rolls, February	1,989.26	
Salaries, March	241.66	
Pay rolls, March	2,808.03	
Salaries, April	241.66	
Pay rolls, April	3,153.55	
Salaries, May	241.66	
Pay rolls, May	3,114.37	
Salaries, June	241.66	
Pay rolls, June	4,037.46	
Salaries, July	241.66	
Pay rolls, July	3,190.58	

Salaries, August	$241.66	
Pay rolls, August	3,270.95	
Salaries, September	241.66	
Pay rolls, September	4,153.40	
Salaries, October	241.66	
Pay rolls, October	3,566.49	
Salaries, November	241.66	
Pay rolls, November	3,566.37	
Salaries, December	241.74	
Pay rolls, December	5,251.25	
		$42,941.31
Total disbursements		$62,007.97
Balance		3,891.66
Total		$65,899.63

Repairs.	Black-smiths.	Scavenger Detail.	Surveyor's Help.	Labor Detail.	Painter.	Inspectors. Conduits.	Sundry Inspectors.	Totals.
32.88	$144.00	$120.00	$21.00	------	------	------	------	$11,169.44
.69	144.00	120.00	27.00	------	------	------	------	12,418.02
00.32	144.00	120.00	34.00	------	$15.00	$66.50	------	8,916.01
32.99	180.00	150.00	66.00	$36.00	------	134.75	------	16,223.66
05.99	144.00	120.00	46.00	48.00	------	52.50	$183.00	10,540.44
16.70	144.00	120.00	58.00	48.00	------	17.50	------	9,835.34
37.62	180.00	180.00	52.00	60.00	------	49.00	------	14,518.88
93.25	144.00	120.00	39.50	48.00	------	59.50	14.00	11,487.38
88.15	180.00	150.00	63.50	60.00	------	283.50	------	16,893.65
76.05	144.00	120.00	54.50	48.00	------	126.00	------	15,007.63
06.20	144.00	130.00	49.00	48.00	------	127.75	------	13,446.00
16.19	180.00	175.00	50.00	60.00	------	99.75	25.00	14,163.87
07.03	$1,872.00	$1,625.00	$560.50	$456.00	$15.00	$1,016.75	$222.00	$154,620.32

Help. Construction and General Repairs.	Sewer Repairs.	Surveyor's Help.	Sundry Labor.	Inspectors.	Carpenter.	Keeper of Tools and Detail.	Sundries.	Totals.
$109.00	$110.50	$57.00	------	------	$9.00	------	$10.00	$2,556.23
73.00	------	18.75	------	------	42.00	------	64.25	1,947.22
147.25	34.00	62.50	$26.25	------	54.00	------	27.25	2,250.10
216.25	579.25	42.50	------	------	84.00	------	------	3,893.05
185.05	258.80	58.50	------	------	60.00	------	------	3,297.00
252.50	115.31	71.00	------	------	42.00	------	------	3,115.33
334.50	37.85	63.25	------	------	90.00	------	------	4,052.51
245.00	81.20	43.00	------	------	81.75	------	------	3,250.30
249.75	252.50	45.25	------	------	125.25	------	------	4,194.45
334.10	143.75	44.00	20.25	------	45.00	------	------	3,682.70
227.00	48.50	41.00	18.00	------	------	------	------	3,511.66
270.50	164.25	58.00	38.25	$15.00	9.00	$16.00	------	4,307.42
,643.90	$1,825.91	$604.75	$102.75	$15.00	$642.00	$16.00	$101.50	$40,057.97

Salaries, August	$241.66	
Pay rolls, August	3,270.95	
Salaries, September	241.66	
Pay rolls, September	4,153.40	
Salaries, October	241.66	
Pay rolls, October	3,566.49	
Salaries, November	241.66	
Pay rolls, November	3,566.37	
Salaries, December	241.74	
Pay rolls, December	5,251.25	
		$42,941.31
Total disbursements		$62,007.97
Balance		3,891.66
Total		$65,899.63

Repairs.	Black-smiths.	Scavenger Detail.	Surveyor's Help.	Labor Detail.	Painter.	Inspectors. Conduits.	Sundry Inspectors.	Totals.
32.88	$144.00	$120.00	$21.00	------	------	------	------	$11,169.44
.69	144.00	120.00	27.00	------	------	------	------	12,418.02
00.32	144.00	120.00	34.00	------	$15.00	$66.50	------	8,916.01
32.99	180.00	150.00	66.00	$36.00	------	134.75	------	16,223.66
05.99	144.00	120.00	46.00	48.00	------	52.50	$183.00	10,540.44
16.70	144.00	120.00	58.00	48.00	------	17.50	------	9,835.34
37.62	180.00	180.00	52.00	60.00	------	49.00	------	14,518.88
93.25	144.00	120.00	39.50	48.00	------	59.50	14.00	11,487.38
88.15	180.00	150.00	63.50	60.00	------	283.50	------	16,893.65
76.05	144.00	120.00	54.50	48.00	------	126.00	------	15,007.63
06.20	144.00	130.00	49.00	48.00	------	127.75	------	13,446.00
16.19	180.00	175.00	50.00	60.00	------	99.75	25.00	14,163.87
07.03	$1,872.00	$1,625.00	$560.50	$456.00	$15.00	$1,016.75	$222.00	$154,620.32

Help. Construction and General Repairs.	Sewer Repairs.	Surveyor's Help.	Sundry Labor.	Inspectors.	Carpenter.	Keeper of Tools and Detail.	Sundries.	Totals.
$100.00	$110.50	$57.00	------	------	$9.00	------	$10.00	$2,556.23
73.00	------	18.75	------	------	42.00	------	64.25	1,947.22
147.25	34.00	62.50	$26.25	------	54.00	------	27.25	2,250.10
216.25	579.25	42.50	------	------	84.00	------	------	3,893.05
185.05	258.80	58.50	------	------	60.00	------	------	3,297.00
252.50	115.31	71.00	------	------	42.00	------	------	3,115.33
334.50	37.85	63.25	------	------	90.00	------	------	4,052.51
245.00	81.20	43.00	------	------	81.75	------	------	3,250.30
249.75	252.50	45.25	------	------	125.25	------	------	4,194.45
334.10	143.75	44.00	20.25	------	45.00	------	------	3,682.70
227.00	48.50	41.00	18.00	------	------	------	------	3,511.66
270.50	164.25	58.00	38.25	$15.00	9.00	$16.00	------	4,307.42
,643.90	$1,825.91	$604.75	$102.75	$15.00	$642.00	$16.00	$101.50	$40,057.97

DISTRIBUTION OF PAY ROLLS.

BRIDGES.

	Carpenters.	Laborers.	Totals.
January	$3.00	.....	$3.00
February	.....	.....	.....
March	.....	.....	.....
April	3.00	.....	3.00
May	9.00	$2.25	11.25
June	48.00	80.25	128.25
July	27.00	30.61	57.61
August	21.00	46.87	67.87
September	6.00	5.00	11.00
October	.....	.....	.....
November	21.00	72.03	93.03
December	3.00	2.95	5.95
Totals	$138.00	$239.96	$380.96

BRIDGES.

RECEIPTS.

Balance,—1904	$1,412.88	
Appropriation Tax Ordinance	100.00	
Other sources	26.00	
		$1,538.88

DISBURSEMENTS.

Lumber	$963.81	
Hardware	14.50	
Tools	1.00	
		$979.31
Pay Rolls—April	3.00	
" " —May	14.25	
" " —June	128.25	
" " —July	50.11	
" " —August	11.25	
" " —September	75.12	
" " —November	93.03	
" " —December	5.95	
		$380.96
Balance		178.61
Total		$1,538.88

CROSS WALKS.

	No. of Walks.	Cost of Walks.	No. of Repairs.	Cost of Repairs.	Total Cost.
January	..	$40.00	..	$40.00	$80.00
February	..	40.00	..	40.00	80.00
March	..	....	4	111.07	111.07
April	9	168.80	11	161.13	329.93
May	6	132.33	14	136.83	269.16
June	6	64.62	21	190.75	255.37
July	..	....	31	291.75	291.75
August	..	....	29	263.25	263.25
September	5	96.42	24	186.12	282.54
October	6	100.43	8	176.42	276.85
November	13	256.74	5	53.35	310.09
December	3	77.35	29	359.53	436.88
Totals	48	$976.69	186	$2,010.20	$2,986.89

DISTRIBUTION OF PAY ROLLS.

1905.

CROSS WALKS.

	Sup't.	Laborers.	Drivers.	Horse and Wagon hire.	Totals.
January	$80.00	.....	.....	.....	$80.00
February	80.00	.....	.....	.....	80.00
March	80.00	$26.70	$4.37	.....	111.07
April	100.00	188.32	31.05	$10.56	329.16
May	80.00	163.40	25.76	.....	269.16
June	80.00	152.14	23.23	.....	255.37
July	10.00	140.76	50.99	.....	291.75
August	80.00	137.75	45.50	.....	263.25
September	100.00	123.79	58.75	.....	282.54
October	80.00	148.85	48.00	.....	276.85
November	80.00	160.74	46.00	14.35	310.09
December	100.00	237.48	56.00	43.40	436.88
Totals	$1,040.00	$1,488.93	$389.65	$68.31	$2,986.89

CROSSWALKS.

RECEIPTS.

Balance, 1904	$363.95	
Appropriation Tax Ordinance	4,000.00	
Total		$4,363.95

DISBURSEMENTS.

Wagon repairs	$100.68	
Tools	3.70	
Harness	1.75	
Board of horses (S. & H.)	300.00	
Blacksmithing	5.60	
		$411.73
Pay Rolls—January	60.00	
" " —February	80.00	
" " —March	131.07	
" " —April	269.40	
" " —May	259.25	
" " —June	325.81	
" " —July	225.88	
" " —August	266.58	
" " —September	288.53	
" " —October	259.65	
" " —November	270.37	
" " —December	550.35	
		$2,986.89
Balance		965.33
Total		$4,363.95

DISTRIBUTION OF PAY ROLLS.

PUBLIC BATHS.

	Sup't.	Ass't Sup't.	Firemen.	Matrons.	Carpenter.	Totals.
January	$216.00	$180.00	$180.00	$48.00	....	$624.00
February	216.00	180.00	180.00	48.00	....	624.00
March	216.00	180.00	180.00	48.00	....	624.00
April	180.00	150.00	150.00	38.00	....	518.00
May	144.00	120.00	120.00	24.00	$12.00	420.00
June	156.00	130.00	130.00	28.00	....	444.00
July	288.00	237.50	240.00	58.00	18.00	841.50
August	234.00	197.50	195.00	48.00	....	674.50
September	292.50	243.75	243.75	60.00	....	840.00
October	220.50	183.75	183.75	48.00	3.00	639.00
November	126.00	105.00	105.00	24.00	....	360.00
December	150.00	127.50	187.50	24.00	....	489.00
Totals	$2,439.00	$2,035.00	$2,095.00	$496.00	$33.00	$7,008.00

PUBLIC BATHS.

Annual Report—1905.

ATTENDANCE.

	Summer Ave.		Walnut St.		Morris Ave.	
	Males.	Females.	Males.	Females.	Males.	Females.
January	948	56	1,020	97	2,125	212
February	980	44	810	81	1,321	104
March	2,986	98	1,710	138	2,697	183
*April	1,497	61	1,765	70	2,159	160
May	2,943	68	3,250	165	3,759	230
June	5,085	305	7,310	1,480	6,173	420
July	9,726	1,487	14,685	2,060	14,467	1,605
August	6,862	849	10,480	2,415	13,177	1,174
September	3,677	329	4,115	270	6,696	428
October	3,097	210	1,950	201	3,847	159
†November	1,312	35	1,100	68	1,139	28
‡December	420	85	198	25	908	43
Totals	39,533	3,627	48,393	7,070	58,468	4,746

* Baths closed from April 22d to end of month.

† Baths closed from November 11th to end of month.

‡ Baths reopened December 8th and continued open to end of month.

CASH RECEIVED FROM RENT OF ROOMS, SUITS AND TOWELS.

Summer Avenue Bath	$232.75
Walnut Street "	367.35
Morris Avenue "	420.25
Total	$1,020.35

Five shower baths were placed in the Summer Ave. Bath House—something that has always been wanted. This bath has never had any.

PUBLIC BATHS.

RECEIPTS.

Balance—1904	$643.37	
Appropriation Tax Ordinance	6,500.00	
All other sources	2,620.35	
Total		$9,763.72

DISBURSEMENTS.

Lumber	$4.07	
Boiler repairs	32.12	
Glass	.60	
Hardware	31.67	
Coal	1,550.40	
Disinfectant	40.00	
Electric Light	131.75	
Washing and sundries	186.75	
Brooms	3.15	
Insurance	373.38	
Bathing suits	92.20	
Hose	83.68	
Plumbing	53.60	
Stationery and incidentals	15.15	
Ice	17.45	
		$2,616.47
Pay Rolls—January	$468.00	
" " —February	624.00	
" " —March	780.00	
" " —April	518.00	
" " —May	306.00	
" " —June	558.00	
" " —July	662.00	
" " —August	686.00	
" " —September	840.00	
" " —October	651.00	
" " —November	516.00	
" " —December	499.00	
		$7,108.00
Balance		39.25
Total		$9,763.72

DISTRIBUTION OF PAY ROLLS, 1905.

PUBLIC GROUNDS.

	Sup't.	Laborers.	Driver.	Carpenter.	Totals.
January	$72.00	$110.97	....	....	$182.97
February	72.00	133.64	$3.68	....	209.32
March	72.00	129.38	1.84	....	203.22
April	36.00	88.20	3.91	$6.00	134.11
May	....	....	....	....	....

DISBURSEMENTS

Car fare	$15.00	
Incidentals (Douglass)	13.75	
Printing	37.75	
Horse and wagon hire	2.00	
Laying walks (D. B. Harper)	2,160.90	
		2,229.40
Pay Roll, January	109.81	
" " February	48.00	
" " March	90.00	
" " April	72.00	
" " May	72.00	
" " June	90.00	
" " July	72.00	
" " August	72.00	
" " September	90.00	
" " October	72.00	
" " November	[illegible]	
" " December	80.00	
		968.81
Balance		3,100.78
Total		$[illegible]

WHARVES

[illegible]

Balance [illegible]	$1,223.[illegible]
Appropriation [illegible]	100.00
[illegible]	945.00
[illegible]	$[illegible]

[illegible]

[illegible]	$[illegible]
[illegible]	$[illegible]
[illegible]	[illegible]
[illegible]	[illegible]
[illegible]	$[illegible]
[illegible]	$[illegible]
[illegible]	$[illegible]

New walks laid by order of the Board	6,369	sq. ft.
Walks relaid by order of the Board	1,195	" "
New walks laid by Ordinance	59,411	" "
Walks repaired by Ordinance	592	" "
Concrete walks laid by Ordinance	40,914	" "
Total	698,319	" "
Curb laid by order of the Board	1,148	lineal ft.
Curb laid by Ordinance	27,950	" "
Curb reset by Ordinance	983	" "
Total	30,081	" "

DISTRIBUTION OF PAY ROLLS.

SIDEWALKS.

	Clerk.	Carpenter.	Sundries.	Totals.
January	.....	.....	.....	.....
February	$66.00	.....	.....	$66.00
March	72.00	.....	.....	72.00
April	90.00	.....	.....	90.00
May	72.00	.....	.....	72.00
June	72.00	.....	.....	72.00
July	90.00	.....	.....	90.00
August	72.00	.....	.....	72.00
September	90.00	.....	.....	90.00
October	89.50	.....	.....	89.50
November	72.00	.....	42.00	114.00
December	90.00	18.81	52.50	161.31
Totals	$875.50	$18.81	$94.50	$988.81

SIDEWALKS.

RECEIPTS.

Balance,—1904	$ 288.68	
Appropriation Tax Ordinance, 1905	1,000.00	
All other sources	5,120.31	
Total		$6,408.99

Carpenters' work in the various departments, as follows:—

STREETS AND HIGHWAYS.

Repairs at City Hall office	$ 18.00	
New shed for sweepers at City Stables	58.25	
Repairs for William street office	36.00	
Repairs Tools	73.25	
Repairs City Stables	255.25	
Street signs	310.50	
Tool house, Bergen street	47.75	
Culvert, Adams street	6.60	
Shed at Old Burying Ground	15.00	
General jobbing	448.50	
		$1,269.10

DEPARTMENT OF SEWERS AND DRAINAGE.

Repairs at Pumping Station	$ 76.00	
" William street office	24.00	
" Plum Point Lane	4.25	
" City Stables	108.00	
" Adam and South streets drain	3.75	
Sundry work, City Hall office	24.00	
General jobbing	402.00	
		642.00

DEPARTMENT OF PUBLIC BATHS.

Repairs Summer avenue bath	$ 12.00	
" Morris avenue bath	6.00	
" Walnut street bath	15.00	
		33.00

DEPARTMENT OF BRIDGES.

Sundries	$ 3.00
Repairs to Plane street bridge	7.50
" " Bloomfield avenue bridge	64.12
" " Madison street bridge	8.25
" " Halsey street bridge	67.06
" " Washington street bridge	25.00
" " Hamburg place bridge	4.25
" " Wright street bridge	9.75
" " River street bridge	45.08
" " Mulberry street bridge	105.00
" " Miller street bridge	11.00

Repairs to Commercial street bridge.....		$23.25
" " Market street bridge	3.00	
" " Jefferson street bridge	3.00	
" " Sixth avenue bridge	1.70	
		$380.96

DEPARTMENT OF SIDEWALKS.

Repairs to walk, Sixth avenue	$ 18.81	
		18.81
Totals		$2,343.87

Herewith is presented the report of Mr. J. H. Huegel, Superintendent of the Department of Public Lighting, for the year ended December 31st, 1905. The lighting of the streets and parks of this city is by electric arc, electric incandescent and gas lamps: 2,038 arc lamps were in service on December 31, 1904; 77 arc lamps were installed during the year 1905; 39 arc lamps were added by annexation of Vailsburgh, making a total of 2,154 arc lamps in service December 31st, 1905. Increase, 116. Arc lamps are of 2,000 nominal candle power, 450 watts at lamp terminal, burn 4,000 hours and cost $95.00 per lamp per year, with the exception of 39 arcs in the Vailsburgh section, which burn 4,000 hours, are of 1,200 candle power and cost $90.00 per lamp per year.

The General Electric enclosed arc lamp, alternating current, is now used exclusively, all open arcs having been replaced by enclosed arcs.

Outages reported during the year were 15,265 lamp hours, for which a pro rata deduction was made.

Outages on the new system of enclosed arc lamps were considerable less than with the open arc lamps; it also gives a superior and better distributed light and a more satisfactory service.

The inner globe of the enclosed lamp in time becomes tarnished from the intense heat of the arc and coated with burned carbon, thereby reducing the efficiency of the light.

To remedy this, small boxes containing inner globes will be attached to lamp poles to enable trimmers to place clean globes on all lamps at every trimming.

The underground service on Springfield Ave., was extended from Jones St. to Bergen St., all poles, fixtures and wires removed and ornamental poles of the "goose-neck" pattern placed for arc service.

Arc lamps on ornamental poles and connected with the underground service are located on Broad St from Court St. to Belleville Ave., on Market St. from Pennsylvania R. R. Depot to High St., and on Springfield Ave. from Market St. to Bergen St.

Conduits are laid and arc lamps will be connected on Washington St., from Market St. to Academy St.; Halsey St., from Market St. to Academy St.; Beaver St., from Market St. to Clinton St.; Clinton St., from Broad St. to Mulberry St.; Mulberry St., from Mechanic St. to Canal St.; Mechanic St., from Broad St. to Mulberry St.; West Park St., from Broad St. to Halsey St., and North Canal St., from River St. to Mulberry St.

Electric incandescent lamps in service, Dec. 31, 1904...	87
" " " installed during the year 1905	14
" " " added by annexation of Vailsburgh	69
" " " in service Dec. 31, 1905...	170
Increase	83

The 14 new incandescents were located as follows:

Thirteenth St. foot bridge of D., L. & W. R. R.....	4
Eleventh St. " " " " " "	4
Grey st. " " " " " "	4
Aqueduct Alley	2

Incandescent lamps of the Clinton Township District, annexed in 1897, and all installed since annexation, are of 32 candle power and cost $17.00 per lamp per year.

Those of the Clinton Township Annex of 1902 are of 32 candle power and cost $16.00 per lamp per year.

Incandescents of the Vailsburgh section are of 25 candle power and cost $15.00 per lamp per year.

Gas lamps in service, Dec. 31, 1904.....		2,139
" " lighted during year 1905.....	50	
" " relighted during year 1905.....	4	
" " discontinued	62	
" " in service, Dec. 31, 1905.....		2,131
Decrease		8

Outages reported during the year were 3,157 lamps, or 49,634 lamp hours, for which a pro rata deduction was made. Lamps in use are the square and miners' No. 2 globe lamps provided with a 4-foot burner. The light is an open flat flame.

Lamps burn 4,000 hours and cost $19.00 per lamp per year. The city owns all the lamp-posts and lamps; the contractor lights, extinguishes and cleans the lamps. Lamp-posts are erected and all repairs are made by this Department. Attention was given 14,395 lamps; 7,030 lights of glass were put in 5,048 lamps; 223 globes and 604 pillar cocks were placed on lamps; 425 lamps and 104 lamp-posts were painted; 91 service pipes and 276 lamps were repaired; 50 lamp-posts were erected, 14 reset, 3 relocated and 394 straightened; 95 old lamp-posts were removed and 19 found broken.

The candle power of the gases during the year was: highest, 23.90; lowest, 16.10; average, 19.675, an increase of .37 of a candle over the average of last year. The contract requirements are 14 candles. The pressure of the gases during the year was: highest, 3.50 inches; lowest, 1.60 inches; average, 2.475 inches. 4,213 meters were tested during the year and 17 found incorrect.

The following table shows the total number of lamps in service each year, as per annual report since 1893:

	Arc Lamps.	Incandescent Lamps.	Gas Lamps.	Totals.
December 31st, 1893	916	..	2,796	3,712
" " 1894	1,264	..	2,334	3,598
" " 1895	1,562	..	2,015	3,577
" " 1896	1,564	..	1,982	3,546
" " 1897	1,607	42	1,993	3,642
" " 1898	1,642	30	2,008	3,680
" " 1899	1,689	12	2,015	3,716
" " 1900	1,725	12	2,009	3,746
" " 1901	1,794	9	2,074	3,877
" " 1902	1,859	60	2,180	4,099
" " 1903	1,973	61	2,155	4,189
" " 1904	2,038	87	2,139	4,264
" " 1905	2,154	170	2,131	4,455

The following is a report of poles, wires, cables, conduits, ducts and manholes for the year 1905: On Dec. 31, 1904, there were 15,248 poles in the streets and alleys of this city; of these 10,549 were wooden poles and 4,699 iron trolley poles. During 1905, 1,027 new wooden poles and 13 new iron trolley poles were erected; 283 wooden poles were added by annexation of Vailsburgh; 37 wooden and 1 iron trolley poles were removed; 384 defective and unsightly wooden poles were replaced, leaving 11,822 wooden and 4,711 iron trolley, a total of 16,533 poles in the streets and alleys of this city on Dec. 31, 1905; an increase of 1,285 poles for the year 1905.

There are 120.05 miles of aerial cable, 258.34 miles of cable in subways, a total of 378.39 miles of aerial and subway cable; 26,486.99 miles of open wire and conductors in aerial cable; 19,940.56 miles of conductors in subway cable, a total of 46,427.55 miles of open wire and conductors in aerial and subways cables; 60.79 miles of conduits, 487.881 miles of single duct and 1,014 manholes.

All companies were notified to paint, mark and number all poles. This was only partly complied with, leaving a large number of poles to be painted, marked and numbered.

PUBLIC SERVICE CORPORATION OF NEW JERSEY.
STREET RAILWAY DEPARTMENT.

	WOOD.	IRON.	
Number of poles Dec. 31, 1904	36	4,699	
			4,735
" " erected during 1905	0	13	
" " removed during 1905	0	1	
" " Dec. 31, 1905	36	4,611	
			4,747
Increase			12

Number of miles of cable, aerial, Dec. 31, 1905—		
1,000,000 C. M.....	.24 miles	
750,000 C. M.....	.12 "	
500,000 C. M.....	59.67 "	
211,600 C. M.....	35.03 "	
		95.16
Number of miles of cable in subways, Dec. 31, 1905—		
1,000,000 C. M.....	16.763 miles	
750,000 C. M.....	1.872 "	
500,000 C. M.....	7.417 "	
1,000,000 C. M. bare copper	10.141 "	
2/0 3 Cond	11.22 "	
		47.415
Number of miles of wire, aerial, Dec. 31, 1905—		
1/0 trolley wire, and 2/0 trolley wire..		99.39
Number of miles of conduits Dec. 31, 1904.....		9.97
" " " Dec. 31, 1905		10.84
" " single ducts Dec. 31, 1904.....		132.255
" " " " Dec. 31, 1905		145.765
Number of manholes Dec. 31, 1904		158
" " Dec. 31, 1905		174

UNITED ELECTRIC COMPANY OF NEW JERSEY.

	WOOD.	
Number of poles Dec. 31, 1904	5,195	
" " erected during 1905	385	
" " removed during 1905	30	
" " replaced during 1905	248	
" " added by annexation of Vailsburgh...	283	
" " Dec. 31, 1905		5,833
Increase		638

Number of miles of cable in subways Dec. 31, 1905	76.5
" " wire, aerial, Dec. 31, 1905	596.8
" " conduits Dec. 31, 1904	6.6
" " " Dec. 31, 1905	7.4
" " single ducts Dec. 31, 1904	97.5
" " " Dec. 31, 1905	105.1
Number of manholes Dec. 31, 1904	278
" " Dec. 31, 1905	340

NEW YORK & NEW JERSEY TELEPHONE COMPANY.

	WOOD.	
Number of poles Dec. 31, 1904	3,217	
" " erected during 1905	636	
" " removed during 1905	7	
" " replaced during 1905	108	
" " Dec. 31, 1905		3,846
Increase		629
Number of miles of aerial cable Dec. 31, 1905		15.40
" " cable in subways Dec. 31, 1905		80.96
" " conductors in aerial cable Dec. 31, 1905	752.9	
" " open wire, aerial	1,054.53	
" " dist. wire, aerial	8.5	
		18,771.93
" " conductors in subway cable		16,955.1
Number of miles of conduits Dec. 31, 1904		29.04
" " " Dec. 31, 1905		33.33
" " single duct Dec. 31, 1904		152.51
" " " Dec. 31, 1905		191.70
Number of manholes, Dec. 31, 1904		340
" " Dec. 31, 1905		416

NEWARK TELEPHONE COMPANY.

	WOOD.	
Number of poles, Dec. 31, 1904	454	
" " replaced during 1905	17	
" " Dec. 31, 1905		454
Number of miles of aerial cable, Dec. 31, 1905		1
" " cable in subways, Dec. 31, 1905		18.70

Number of miles of conductors of aerial cable, Dec. 31, 1905	1,572	
" " open wire, aerial, Dec. 31, 1905	4,041.5	
		5,613.5
" " conductors in subway cable		23.34
Number of miles of conduits, Dec. 31, 1904		8.5
" " " Dec. 31, 1905		9.22
" " single ducts, Dec. 31, 1904		45.25
" " " Dec. 31, 1905		44.64
Number of manholes, Dec. 31, 1904		78
" " Dec. 31, 1905		84

WESTERN UNION TELEGRAPH COMPANY.

	WOOD.	
Number of poles Dec. 31, 1904	597	
" " replaced during 1905	1	
" " Dec. 31, 1905		597
Number of miles of aerial cable, Dec. 31, 1905		6
" " cable in subways, Dec. 31, 1905		1.75
" " conductors in aerial cable, Dec. 31, 1905.		
" " and open wire, aerial, Dec. 31, 1905		478.17
" " conductors in subway cable, Dec. 31, 1905		134.17
" " single duct		.176

NORTHEASTERN TELEPHONE & TELEGRAPH COMPANY.
(Formerly American Telephone and Telegraph Company.)

	WOOD.	
Number of poles Dec. 31, 1904	254	
" " replaced during 1905	15	
" " Dec. 31, 1905		254
Number of miles of cable in subways, Dec. 31, 1905		5
" " conductors and aerial wire, Dec. 31, 1905		311

NEWARK DISTRICT TELEGRAPH COMPANY.

	WOOD.	
Number of poles Dec. 31, 1904	4	
" " erected during 1905	1	
" " Dec. 31, 1905		5

Company uses ducts of telephone companies.

Number of miles of aerial cable. Dec. 31. 1905		.75
" " cable in subways. Dec. 31. 1905...		2.25
" " conductors in aerial cable. Dec. 31. 1905	8.	
" " conductors in subway cable.....	221.	

POSTAL TELEGRAPH CABLE COMPANY.

Company has no poles: uses poles of United Electric Co. of N. J., and ducts of N. Y. & N. J. Tel. Co.

Number of miles aerial wire. Dec. 31. 1905	125
" " conductors in subways. Dec. 31. 1905	50

POLICE DEPARTMENT SIGNAL SERVICE.

Maintained by N. Y. & N. J. Tel. Co.

Number of poles Dec. 31. 1905.....		125
Number of miles of aerial cable Dec. 31. 1905		.74
" " cable in subways. Dec. 31. 1905.....		9.71
" " conductors in aerial cable. Dec. 31. 1905	183	
" " open aerial wire.....	168.2	
		351.2
" " conductors in subway cable		99.92

FIRE DEPARTMENT SIGNAL SERVICE.

	WOOD.	
Number of poles Dec. 31. 1904	667	
" " erected during year 1905	5	
" " Dec. 31. 1905		672
Increase.....		5
Number of miles of aerial cable. Dec. 31. 1905.....		1.
" " cable in subways. Dec. 31. 1905		16.06
" " conductors in aerial cable		
" " and open wires		132.
" " conductors in subway cable		146.37

THE FOLLOWING IS A TABLE OF ALL POLES, CABLES, WIRES, CONDUCTORS, CONDUITS, SINGLE DUCTS AND MANHOLES OWNED AND OPERATED BY THE VARIOUS COMPANIES AND CITY DEPARTMENTS ON DECEMBER 31, 1905.

	Number of Poles.	NUMBER OF MILES.						Number of Manholes.
		Aerial Cable.	Subway Cable.	Aerial Conductors and Open Wire.	Subway Conductors.	Conduits.	Ducts.	
Public Service Corporation of New Jersey—Street R. R. Department	4,747	95.16	47.415	99.39	------	10.84	145.765	174
United Electric Company of New Jersey	5,833	------	76.5	596.8	------	7.4	105.1	340
New York & New Jersey Telephone Company	3,846	15.40	80.96	18,771.93	16,955.1	33.33	191.70	416
Newark Telephone Company	454	1.	18.70	5,613.5	2,334.	9.22	44.64	84
Western Union Telegraph Company	597	6.	1.75	478.17	134.17	------	.176	------
Northeastern Telephone & Telegraph Company (formerly American Tel. & Tel. Co.)	254	------	5.	311.	------	------	------	------
Newark District Telegraph Company	5	.75	2.25	8.	221.	------	------	------
Postal Telegraph Cable Company	------	------	------	125.	50.	------	------	------
Police Department—Signal Service	125	.74	9.71	351.2	99.92	------	------	------
Fire Department—Signal Service	672	1.	16.06	132	146.37	------	------	------
Totals	16,533	120.05	258.34	26,486.99	19,940.56	60.79	487.881	1,014

Respectfully submitted,

C. M. SHIPMAN,

Gen'l Supt. Works.

REPORT OF

THE ENGINEER AND SUPERINTENDENT OF THE DEPARTMENT OF WATER.

To the Chief Engineer of the Board of Street and Water Commissioners of the City of Newark.

DEAR SIR:—Herewith is submitted the report of the condition and operation of the work of the Department of Water for the year ended December 31st, 1905.

CONSUMPTION.

The number of new taps made during the year was 1,287 (an increase of 282 over last year); of these 10 were of 6-inch diameter, 9 of 4-inch, 8 of 3-inch, 43 of 2-inch, 2 of 1½-inch, 113 of 1-inch, and 1,102 of ⅝-inch diameter.

The number of taps at the 1st of January, 1906, including Vailsburgh and Columbia Heights, was 39,993.

The following table gives the delivery of water to the distributing reservoirs (average consumption for 1905):

CONSUMPTION STATEMENT FOR THE YEAR ENDING DECEMBER 31st, 1905.

MONTH, 1905.	Total consumption per month. Million Gallons.	Average daily consumption Million Gallons.	Mean Temperature.	Rainfall in inches.
January	1,058.0	34.1	26.6	3.67
February	1,095.3	39.1	23.2	2.13
March	1,021.6	32.9	39.4	3.80
April	932.9	31.1	50.4	2.49
May	918.3	29.6	61.0	1.25
June	922.1	30.7	68.6	3.02
July	980.8	31.6	74.8	6.27
August	974.1	31.4	71.0	5.14
September	975.3	32.5	65.7	6.27
October	1,083.8	34.9	55.4	2.91
November	921.4	30.7	43.2	2.03
December	983.1	31.7	36.7	3.23
Total	11,866.7	----	----	42.21

Average daily consumption, 32,525,000 gallons.
Average daily consumption per tap, 813 gallons.
Approximate number of taps at the end of the year, 39,993.

The accompanying folder gives the consumption since 1892, when the gravity plant was introduced. The average daily consumption per tap was increased from 800 gallons in the year 1904 to 813 gallons per tap in 1905. This was partly due to the cold weather of last winter—householders being in the habit of letting the water run to prevent freezing of the service pipes—and also on account of the comparatively small rainfall during last summer.

Detailed information in regard to street mains, services, meters, etc., may be found in the appended tables.

DISTRIBUTION.

The extensions to street mains in the city, including Vailsburgh and Columbia Heights (annexed), during the year 1905 were as follows:

1,501	lineal	feet of	20	inch	diameter.
5,429	"	"	16	"	"
461	"	"	12	"	"
1,976	"	"	10	"	"
595	"	"	8	"	"
23,632	"	"	6	"	"
33,594	lineal feet.				

The approximate mileage of pipe of different diameters in the city, including pipe purchased from the West End Land Improvement Co. in Columbia Heights and pipe acquired by the annexation of Vailsburgh, is as follows:

43,200	lineal	feet of	60	inch	diameter.
141,197	"	"	48	"	"
82,192	"	"	42	"	"
49,718	"	"	36	"	"
24,920	"	"	30	"	"
48,605	"	"	24	"	"
40,300	"	"	20	"	"

16,134	lineal	feet of	16	inch	diameter.
41,032	"	"	12	"	"
61,541	"	"	10	"	"
47,747	"	"	8	"	"
987,155	"	"	6	"	"
165,678	"	"	4	"	"
970	"	"	3	"	"

$$1{,}750{,}389 \text{ lineal feet} = 331 \frac{2709}{5280} \text{ miles.}$$

This does not include any pipe connected with the High Pressure system.

Belleville Township laid 580 feet of 6-inch diameter.

The total length of pipe connected with the works is as follows:

In the city..... $331 \frac{2709}{5280}$ miles.

Belleville Township ..... $13 \frac{1581}{5280}$ "

Total ..... $344 \frac{4290}{5280}$ "

The amount of work done in relaying was as follows:

168	feet	of	24-inch	pipe.	
188	"	"	20-	"	"
3,281	"	"	12-	"	"
210	"	"	10-	"	"
1,966	"	"	8-	"	"
4,197	"	"	6-	"	"

$$\text{Total...} 10{,}010 \text{ lineal feet} = 1 \frac{4730}{5280} \text{ miles.}$$

The amount of work done in the way of lowering pipe:

1,300	lineal	feet	of	8-inch	diameter.	
3,365	"	"	"	6- "	"	
3,325	"	"	"	4- "	"	
Total...7,990	lineal	feet	=	1 $\frac{2710}{5280}$	miles.	

During the year 106 new hydrants were set; of these 50 were substituted in place of old hydrants and 56 were added to the total number of new hydrants.

One hundred and two were added to the total number of hydrants in the city by the annexation of Vailsburgh and Columbia Heights; making the total number of hydrants in the city 2,523.

HIGH PRESSURE FIRE SERVICE.

During the last year the remainder of the High Pressure Fire Service on Broad St., north, across the Morris Canal, and on Market St., east to the Pennsylvania Station, was completed and the water turned on.

On August 9th, the date of the formal acceptance of the Cedar Grove Reservoir, a test was made of the High Pressure Fire Service in front of the Military Park junction of Broad and North Canal Sts., four hydrants being in use with ten 2½-inch streams. This test proved to be an entire success.

EXTENSION OF BELLEVILLE SYSTEM.

During the last few years numerous complaints were made by manufacturers in the center of the city in regard to insufficient pressure during working hours (pressure taken at the corner of Broad and Market Sts. at such times was 22 pounds). In order to overcome this difficulty, the district known as "Belleville System," supplying Woodside

between Summer Ave. and the Passaic River down to Market St., east of High St. and west of Plane St., was extended, and supplemented by connections through pressure regulators with 36 inch Cedar Grove Reservoir supply mains. The central part of the city bounded westerly by the easterly side of Washington St., Clinton Ave., Elizabeth Ave. to Waverly, and easterly by Frelinghuysen Ave., westerly side of N. J. R. R. Ave. to Passaic River (which section was formerly supplied by the Clifton Avenue Reservoir and known as the Low Service District), was added to the Belleville district and the pressure increased to about 40 pounds at Market and Broad Sts., which gives satisfactory results.

The section east of N. J. R. R. Ave. to Newark Bay is supplied by the Clifton Avenue Reservoir and known as "Low Service System." In order to increase the pressure of this Low Service system during times of heavy draft a 12-inch connection between the 20-inch High Pressure system (recently laid) at Market Street Station and the 12-inch Low Service feeder on the easterly side of N. J. R. R. Place was made. A 12-inch pressure regulator was installed beneath the first arch under N. J. R. R. Ave., east of Market street, and maintaining a pressure of about 35 pounds on the down-stream end.

The above improvements were obtained by an expenditure of less than $2,000, and has postponed for several years the necessity for additional feeder mains which would have cost at least $200,000 to obtain equivalent results.

D., L. & W. RAILROAD TRACK DEPRESSION.

On account of the D., L. & W. R. R. track depression from High St. west, it became necessary to abandon the 4-inch pipe on Boyden St. and also the 4-inch pipe in Sheffield St. across the track depression and put the 10-inch High Service pipe and the 24-inch Low Service main in Nesbitt St., underneath the depression; the 24-inch High Service main in Clifton Ave. on a bridge located on the westerly side of said avenue. The 20-inch High Service pipe at Eighth

Ave. and Orange St., formerly known as Special High Service pump main, was also cut out and will be replaced during the coming year.

24-INCH CEMENT PIPE IN EIGHTH AVENUE, BETWEEN FACTORY AND BROAD STREETS.

A few leaks occurred during the year on the 24-inch cement pipe in Eighth Ave. and had to be repaired. The leaks were undoubtedly due to the increase of pressure on this main, and it would be advisable to relay this 24-inch main with cast iron pipe as soon as possible.

SUPPLY OF THE DISTRIBUTING RESERVOIRS FROM CEDAR GROVE RESERVOIR.

Previous to the completion of the Cedar Grove Reservoir the distributing reservoirs in the city were supplied from the Macopin Intake. It was found at times, especially after heavy rainstorms, that the water supplied to the city was very muddy, and it was necessary to flush the hydrants frequently, which was not only a source of great expense, but also an annoyance on account of the numerous complaints in regard to roily water. After the water was turned on from the new reservoir the 60-inch steel pipe was filled and thoroughly flushed and the water was sent to the South Orange Avenue Reservoir, supplying the regular and special High Service districts, and also to the Belleville Reservoir, supplying the Low Service districts. Since this was done we have had no complaints in regard to muddy water, which shows that the New Reservoir, as originally intended, is a very efficient sedimentation basin as well as a storage reservoir.

REVENUE FROM WATER.

For revenue from water during the last year, see financial statement appended.

Respectfully submitted,

G. SANZENBACHER,

Engineer and Superintendent Dept. Water.

DETAIL STATEMENTS

to accompany

Report of the Engineer and Supt.

Department of Water.

STATEMENT OF PIPE LAID IN 1905.

Month, 1905.	LOCATION OF PIPE.	Length in Lineal Feet. 20 in.	16 in.	12 in.	10 in.	8 in.	6 in.	Stops.	Hydrants
Jan.	Vanderpool St., from dead end west of Ave. C west	----	----	----	----	----	132	----	----
Feb.	Fifteenth Ave., from South 12th St. east	----	----	----	----	----	144	1	----
March	Tillinghast St., from dead end east of Reeves Pl. to Osborne Terrace	----	----	----	----	----	252	----	----
"	Bergen St., from dead end south of Hawthorne Pl. south	----	----	----	----	----	48	----	----
April	Vrooms Alley, from Franklin St. south 156 feet	----	----	----	----	----	156	----	1
"	Court St., south side, from west side of Plane St. to Washington St	----	----	----	----	----	487	1	----
"	Noll Pl., from South Sandford St. to Richelieu Terrace, Vailsburgh	----	----	----	----	----	474	1	1
"	Seymour Ave., from Renner Ave. to Eckert Ave	----	----	----	----	----	539	2	1
"	Eckert Ave., from Seymour Ave. west	----	----	----	----	----	471	1	1
"	Buffington Ave., from Fabyan Pl. west to city line	----	----	----	----	----	321	1	1
"	Hunterdon St., from dead end south of Grant St. north about 50 feet	----	----	----	----	----	69	----	----
May	Clifton Ave., from Heller Parkway north	----	----	----	275	----	----	1	1
"	Clifton St., from Frelinghuysen Ave. west 222 feet	----	----	----	----	----	222	1	----
"	Avon Ave., from South 19th St. to Montgomery Ave	----	----	----	222	----	----	----	----
"	Montgomery Ave., from Avon Ave. south to city line	----	----	----	----	----	513	1	2
"	South 20th St., from dead end south of 17th Ave. to 18th Ave. and east to dead end on 18th Ave	----	----	----	----	----	305	1	1
"	High St., from 13th Ave. to Nelson Pl	----	----	----	----	----	336	3	1
"	Bigelow St., from Ridgewood to Badger Ave	----	----	----	----	----	254	1	----
"	Badger Ave., from Bigelow St. south	----	----	----	----	----	184	1	1
"	Hunterdon St., from dead end south of Alpine St. to Bigelow St	----	----	----	----	----	164	1	1
"	N. J. R. R. Ave., west side, from East Kinney St. to Pennington St	----	----	----	----	----	1,335	5	2
"	Crossed N. J. R. R. Ave. at East Kinney St	----	----	----	----	----	92	1	----
"	Crossed N. J. R. R. Ave. at Oliver St	----	----	----	----	----	86	1	----
"	Sixteenth Ave., from dead end east of Hunterdon St. east to Morris Ave	----	----	----	----	----	196	1	----
"	Ridge St., from dead end south of Second Ave. south	----	----	----	----	----	240	----	----
"	Sixteenth Ave., from South 8th St. to Jacob St	----	----	156	----	----	----	1	----
"	Connecting, South 8th St. and Jacob St	----	----	----	58	----	----	1	----
"	Ninth Ave., from 15th St. west to city line	----	----	----	----	----	168	----	----
June	Sixteenth Ave., from South 12th St. to South 17th St	----	----	----	----	----	1,294	4	----
"	South 12th St., from Sixteenth Ave. south	----	----	----	----	----	61	1	----
"	South 13th St., cross Sixteenth Ave	----	----	----	----	----	57	2	----
	Carried forward	----	----	156	555	----	8,000	34	14

STATEMENT OF PIPE LAID IN 1905.

Month, 1905.	LOCATION OF PIPE.	LENGTH IN LINEAL FEET. 20 in.	16 in.	12 in.	10 in.	8 in.	6 in.	STOPS.	HYDRANTS
	Brought forward	----	----	156	555	----	8,600	34	14
June	South 14th St., cross Sixteenth Ave	----	----	----	----	----	75	2	----
"	South 15th St., from Sixteenth Ave. north, connecting to dead end	----	----	----	----	----	145	1	----
"	South 16th St., from Sixteenth Ave. north	----	----	----	----	----	33	1	----
"	South 20th St., from Sixteenth Ave. north	----	----	----	----	----	24	----	----
"	Sherman Ave., from Concord to Runyon St	----	----	----	----	----	264	1	----
"	Willoughby St., from Lyons Ave. north to Forrest Pl	----	----	----	----	----	703	1	2
"	Belmont Ave., from Alpine St. north	----	----	16	----	----	----	----	----
"	Rose St., across Hunterdon St	----	----	----	----	----	75	----	----
"	Third Ave., from Mt. Prospect Ave. to Clifton Ave	----	----	----	----	----	320	----	----
"	Summit Pl., across Summit St	----	----	----	----	----	65	2	----
"	Summit St., from Academy St. north to Morris Canal	----	----	----	----	----	48	----	----
"	New St., across Summit St	----	----	----	----	----	37	1	----
"	Malvern St., from dead end east of Sandford St. east	----	----	----	----	----	288	----	----
"	Across Ferry St. to Manufacturers Pl	----	----	----	49	----	----	1	1
"	Connecting Commonwealth Pl. at Wall St., Vailsburgh	----	----	----	----	38	----	1	----
"	Connecting Lexington Ave. at Wall St., Vailsburgh	----	----	----	----	----	36	1	----
"	Van Buren St., from New York Ave. to Warwick St	----	----	----	----	----	230	1	1
"	Bonykamper Ave., from Brill St. west	----	----	----	----	----	231	----	1
"	Orange Ave., from Wall St. east, Vailsburgh	----	----	----	----	557	----	----	----
July	Thirteenth Ave., from South 20th St. to Grove St	----	----	----	----	----	433	1	1
"	North 6th St., from dead end at Fourth Ave. north	----	----	----	----	----	217	2	----
"	Cliff Hill Pl., from South Sandford St. to Woodside Ave., Vailsburgh	----	----	----	----	----	401	1	1
"	Woodside Ave., from dead end south of Elwood Ave. south	----	----	----	----	----	50	----	----
"	Ridge St., from Bloomfield Ave. north to dead end	----	----	----	----	----	896	1	2
August	Clifton St., from dead end west of Frelinghuysen Ave. west	----	----	----	----	----	36	----	----
"	Lackawanna Ave., east of High St	----	----	----	----	----	144	----	----
"	Connecting Lackawanna Ave. and Plane St	----	----	----	----	----	12	----	----
Sept.	Avon Ave., from Bergen St. to Chadwick Ave	----	----	----	256	----	----	1	----
"	Connecting Avon Ave. and Chadwick Ave	----	----	----	----	----	49	1	----
"	Renner Ave., north of Scheerer Ave	----	----	----	----	----	36	----	----
"	Avon Ave., from dead end west of Peshine Ave. to Hunterdon St	----	----	----	147	----	----	----	----
	Carried forward	----	----	172	1,007	595	13,448	54	23

STATEMENT OF PIPE LAID IN 1905.

Month, 1905.	LOCATION OF PIPE.	Length in Lineal Feet. 20 in.	16 in.	12 in.	10 in.	8 in.	6 in.	Stops.	Hydrants.
	Brought forward	----	----	172	1,007	595	13,448	54	23
Sept.	Millington Ave., from Van Ness Pl. to Ingraham Pl	----	----	53	----	----	221	2	----
"	Millington Ave., from dead end west of Ingraham Pl. to Clinton Pl	----	----	----	----	----	407	1	1
"	Cross St., from Broad St. east	----	----	----	----	----	85	1	----
Oct.	Baldwin Ave., from dead end north of Clinton Ave. to Avon Ave	----	----	----	----	----	1,218	3	3
"	Shanley Ave., from dead end north of Clinton Ave. north	----	----	60	----	----	----	----	----
"	South Nineteenth St., from dead end south of Madison Ave. south	----	----	----	----	----	36	----	----
"	South 11th St., from Springfield Ave. to Eighteenth Ave	----	----	----	----	----	257	1	----
"	Fifteenth Ave., from South 11th St. west to dead end	----	----	----	----	----	145	1	1
"	Avon Ave., from Hunterdon to Bergen St	----	----	----	240	----	----	----	----
"	North 12th St., from Fourth Ave. south and about 30 feet on Fourth Ave	----	----	----	----	----	247	1	----
"	Avon Ave., from Chadwick Ave. to Seymour Ave	----	----	----	291	----	----	1	1
"	South 17th St., from dead end south of 14th Ave. to 15th Ave.	----	----	----	----	----	534	----	2
"	Bergen St., from dead end south of Hawthorne Pl. to about 50 feet south of Custer Ave	----	----	----	----	----	380	2	1
"	South 12th St., from dead end south of Springfield Ave. south	----	----	----	----	----	178	----	----
"	Crossed Fifteenth Ave., connecting dead ends north and south of Fifteenth Ave. on South 17th St	----	----	----	----	----	125	2	----
"	South 17th St., from dead end south of 16th Ave. to 17th Ave	----	----	----	----	----	181	1	----
"	South 17th St., from Seventeenth Ave. south	----	----	----	162	----	----	----	----
Nov.	Miller St., from Broad St. to the east side of N. J. R. R. Ave	----	----	----	----	----	451	3	1
"	Scheerer Ave., from Renner Ave. west	----	----	----	----	----	651	----	1
"	Lexington Ave., from South Sandford St. east, Vailsburgh	----	----	----	----	----	196	1	----
"	Renner Ave., from Hunterdon St. east	----	----	----	----	----	613	1	2
"	Hunterdon St., from Scheerer Ave. to Shephard Ave	----	----	----	----	----	286	1	----
"	Shephard Ave., from Hunterdon St. west	----	----	----	----	----	123	----	1
"	Shephard Ave., from Shephard Pl. to Mapes Pl	----	----	----	----	----	439	1	1
"	Brown St., from Dock St. north	----	----	----	----	----	195	----	1
"	Delancy St., from Van Buren St. east	----	----	----	----	----	168	----	----
"	Ballantine Parkway, between Mt. Prospect Ave. and Clifton Ave	----	----	----	----	----	333	1	----
Dec.	Hunterdon St., from Bigelow St. to Runyon St	----	----	----	----	----	776	2	1
	Carried forward	----	----	285	1,700	595	21,692	80	40

STATEMENT OF PIPE LAID IN 1905.

Month. 1905.	LOCATION OF PIPE.	LENGTH IN LINEAL FEET. 20 in.	16 in.	12 in.	10 in.	8 in.	6 in.	STOPS.	HYDRANTS
	Brought forward	----	----	285	1,700	595	21,692	80	40
Dec.	North Second St., from dead end south of Monclair Ave. south to Grafton Ave	----	----	----	----	----	375	1	1
"	Summer Ave., west side, between Sylvan Ave. and Montclair R. R	----	----	----	----	----	244	1	1
"	Clifton Ave., from Heller Parkway north	----	----	----	276	----	----	----	----
"	North Twelfth St., from dead end south of Fourth Ave. south	----	----	----	----	----	108	----	----
"	Connecting 20-inch low pressure with high pressure in front of New City Hall	----	----	121	----	----	----	1	----
"	Connecting 12-inch low pressure pipe east side of Pennsylvania R. R. with high pressure system	----	----	55	----	----	----	1	----
"	Schley St., from Shaw Ave. north	----	----	----	----	----	408	----	----
"	Thomas St., from Pacific St. to Ave. D and Ave. D from Thomas St. to about 100 feet north of Murray St	----	----	----	----	----	805	2	1
"	Broad St., from south side of Wright St. to intersection of Vanderpool St.; Vanderpool St., from Broad St. to Frelinghuysen Ave	1,501	----	----	----	----	----	2	----
"	Frelinghuysen Ave., from south side of Vanderpool St. to north side of Princeton St	----	5,429	----	----	----	----	5	----
	Totals	1,501	5,429	461	1,976	595	23,632	93	43

During the year 33,594 lineal feet have been laid in the city, of which

1,501 lineal feet of 20-inch diameter
5,429 " " " 16- " "
461 " " " 12- " "
1,976 " " " 10- " "
595 " " " 8- " "
23,632 " " " 6- " "
} 33,594 feet.

STATEMENT OF PIPE RELAID IN 1905.

Month. 1905.	LOCATION OF PIPE.	LENGTH IN LINEAL FEET.						STOPS.	HYDRANTS.
		24 in.	20 in.	12 in.	10 in.	8 in.	6 in.		
Jan.	North Sixth St., across D. L. & W. RR.	----	188	----	----	----	----	1	----
"	Third St., across D. L. & W. RR., wrought iron pipe	----	----	----	----	----	103	1	----
"	Fourth St., across D. L. & W. RR., wrought iron pipe	----	----	----	----	----	93	2	----
Feb.	Bathgate Pl., across D. L. & W. RR., wrought iron pipe	----	----	----	----	----	110	2	----
"	Gray St., across D. L. & W. RR., wrought iron pipe	----	----	----	----	----	106	1	----
March	Roseville Ave., across D. L. & W. RR., wrought iron pipe	----	----	----	----	----	124	----	----
April	North Ninth St., across Bloomfield RR., wrought iron pipe	----	----	----	----	----	209	1	----
"	West Kinney St., from Broad St. to Washington St.	----	----	----	----	----	865	1	----
"	Beecher St., connecting with West Kinney St.	----	----	----	----	----	47	1	----
May	North Eleventh St., north side, across Seventh Ave.	----	----	----	----	----	41	----	----
June	Ferry St., from Bowery St. to Waydell St.	----	----	1,440	----	----	----	3	----
"	Connecting Ferry St. and Bowery St.	----	----	----	----	----	8	----	----
"	Connecting Ferry St. and Vincent St.	----	----	----	----	----	6	1	----
"	Connecting Ferry St. and Waydell St.	----	----	----	----	----	14	----	----
"	Wall St., from Seventeenth Ave. to Orange Ave., Vailsburgh	----	----	----	----	168	----	----	----
"	Wall St., from Seventeenth Ave. to Hillside Road "	----	----	----	----	----	1,040	3	----
"	Springfield Ave., from High St. east to Arlington St.	----	----	----	----	711	----	2	----
"	Connection at Arlington St. across Springfield Ave.	----	----	----	----	16	----	----	----
"	Connection at Shipman St. across Springfield Ave.	----	----	----	----	----	28	----	----
Sept.	North Canal St., from opposite east curb of Broad St. to Mulberry St.	----	----	----	----	916	----	1	----
"	Connecting Pine and North Canal St.	----	----	----	----	----	50	1	----
"	North Eleventh St., north of Sixth Ave.	----	----	----	----	----	185	2	----
"	North Eleventh St., south of Sixth Ave.	----	----	----	----	----	154	2	----
"	Sixth Ave., west of North Eleventh St.	----	----	----	----	----	113	1	----
"	Sixth Ave., east of North Eleventh St.	----	----	----	----	----	89	1	----
[illegible]	Nesbitt St., across D. L. & W. RR.	168	----	----	----	----	----	----	----
"	Nesbitt St., across D. L. & W. RR.	----	----	----	210	----	----	----	----
"	Ferry St., from Waydell to Blanchard St.	----	----	1,841	----	117	----	4	----
----	Elizabeth Ave., Concord St. to Runyon St. and from Peddie St. to Branford St.	----	----	----	----	38	812	5	----
	Totals	168	188	3,281	210	1,966	4,197	36	----

During the year 10,010 lineal feet have been relaid in the city, of which

168 lineal feet of 24-inch diameter
188 " " " 20- " "
3,281 " " " 12- " "
210 " " " 10- " "
1,966 " " " 8- " "
4,197 " " " 6- " "
} 10,010 feet.

STATEMENT OF PIPE LOWERED IN 1905.

Month. 1905.	LOCATION OF PIPE.	Length in Lineal Feet.			Stops.	Hydrants.
		8 in.	6 in.	4 in.		
March	Weston Ave., east of main track of Pennsylvania RR.	----	60	----	----	----
April	Weston Ave., east of main track of Pennsylvania RR.	----	100	----	----	----
May	Sixteenth Ave., from Camden St. to Fairmount Ave.	----	275	----	----	----
June	Summit St., from Central Ave. south to Morris Canal	----	1,580	----	----	----
"	Wall St., from Orange Ave. to city line Vailsburgh	1,300	----	----	----	----
July	Kenmore Ave. from North Sandford St. 520 feet west "	----	----	520	----	----
"	Finlay Pl., from North Sandford St. 360 feet west "	----	----	360	----	----
"	Lanark Ave., from North Sandford St. 250 feet west "	----	----	250	----	----
"	North Sandford St., from Kenmore Ave. 380 feet north "	----	----	380	----	----
August	Bedford St., from 425 feet north of North Sanford St. 650 feet north "	----	----	650	----	----
"	Crawford St., from 500 feet north of South Orange Ave. 615 feet north "	----	----	615	----	----
November	Miller St., from east side of N. J. RR. Ave. 50 feet east	----	50	----	----	----
"	Fairview Ave., between Seventeenth Ave. and Eighteenth Ave.	----	----	550	----	----
"	Broome St., from Springfield Ave. to West Kinney St.	----	1,300	----	----	----
	Totals	1,300	3,365	3,325	----	----

During the year 7,990 lineal feet have been lowered in the city, of which

1,300 lineal feet of 8-inch diameter
3,365 " " " 6- " "
3,325 " " " 4- " " } 7,990 feet.

PIPES LAID, RELAID AND LOWERED, YEAR ENDING DECEMBER 31, [illegible]

	LENGTH IN LINEAL FEET								Total	Gates	Hydrants
	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]			
Pipe LAID (extensions)		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]
Pipe RELAID (substitution of large for small pipes and replacing old [illegible] pipes)	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	[illegible]		[illegible]	[illegible]	
Pipe LOWERED						[illegible]	[illegible]	[illegible]	[illegible]		
MISCELLANEOUS. Valves and hydrants [illegible] for old broken valves and replaced hydrants										[illegible]	[illegible]
Total	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

Total Pipe Laid, Relaid and Lowered during the year [illegible] lineal feet = [illegible] miles.
Total mileage of Pipe connected with the works at the end of the year [illegible]

STATEMENT OF SERVICES FOR YEAR ENDED DECEMBER 31, 1905.

⅝-inch Services. Month.	No. of New Services.	No. of Services Renewed.	No. of Taps only.	No. of Stops and Boxes.	No. of New Water Takers	No. of feet of Pipe.	Charges.
January	27	1	----	----	27	526.	$388.00
February	19	1	----	----	19	335.	276.00
March	65	1	----	----	65	1,221.5	920.00
April	90	10	2	1	90	2,000.5	1,369.00
May	135	2	2	3	135	2,785.	1,921.00
June	116	5	----	----	116	2,135.	1,674.00
July	110	8	1	1	110	2,152.5	1,625.00
August	77	----	----	----	77	1,415.	1,078.00
September	137	----	----	----	137	2,696.5	1,918.00
October	119	2	----	----	119	2,455.	1,686.00
November	95	3	----	----	95	1,954.	1,360.00
December	112	----	5	1	112	2,270.5	1,589.00
Total	1,102	33	10	6	1,102	21,946.5	$15,804.00

STATEMENT OF SERVICES FOR YEAR ENDED DECEMBER 31, 1905.

1-inch Services. Month.	No. of New Services.	No. of Services Renewed.	No. of Taps only.	No. of Stops and Boxes.	No. of New Water Takers	No. of feet of Pipe.	Charges.
January	4	----	----	----	4	88.5	$80.00
February	3	1	----	----	3	84.5	76.00
March	4	3	----	----	4	193.5	128.00
April	9	2	----	----	9	322.	212.00
May	9	4	----	----	9	255.5	244.00
June	9	1	----	----	9	225.	196.00
July	6	----	----	----	6	103.	120.00
August	17	3	----	----	17	428.	388.00
September	5	1	1	----	5	109.5	123.00
October	24	2	1	----	24	693.5	519.00
November	13	1	----	----	13	224.	276.00
December	10	----	----	----	10	190.5	200.00
Total	113	18	2	----	113	2,917.5	$2,562.00

RECAPITULATION, 1905.

SIZE.	No. of New Services.	No. of Services Renewed.	No. of Taps only.	No. of Stops and Boxes.	No. of New Water Takers.	No. of feet of Pipe.	Charges.
⅝ inch	1,102	33	10	6	1,102	21,946.5	$15,804.00
1 inch	113	18	2	----	113	2,917.5	2,562.00
Total.	1,215	51	12	6	1,215	24,864.	$18,366.00

METERS SET BY CONSUMERS, 1905.

Month. 1905.	Lambert.						Nash.		Crown	Worth.		Trident.								Total.
	⅝ in.	¾ in.	1in.	2in.	3in.	4in.	⅝ in.	1½ in.	1in.	3in.	4in.	⅝ in.	¾ in.	1in.	1½ in.	2in.	3in.	4in.	6in.	
January	33	---	---	1	---	---	---	---	---	---	---	1	---	---	---	---	---	---	---	35
February	43	---	---	---	---	---	---	---	---	---	---	3	---	5	---	---	---	---	---	51
March	58	---	1	---	---	---	---	---	---	---	---	2	---	3	---	1	---	1	---	66
April	61	---	---	---	---	---	---	---	---	---	---	2	---	11	---	---	1	---	---	75
May	140	---	---	---	1	---	1	---	---	1	1	1	---	7	---	1	---	---	---	153
June	60	---	3	---	---	---	---	---	---	---	---	31	---	6	---	4	---	---	---	104
July	43	---	1	---	---	---	---	---	---	---	---	37	---	5	---	5	---	1	---	92
August	59	---	2	---	---	---	---	---	---	---	---	40	2	6	---	2	---	---	---	111
September	51	---	4	1	---	---	1	---	---	---	---	24	---	7	1	1	---	1	---	91
October	41	1	9	---	---	---	---	1	1	---	---	36	---	6	1	1	1	1	1	100
November	51	---	4	---	1	---	---	---	---	---	---	43	---	6	---	2	1	---	1	109
December	29	1	---	---	---	1	---	---	---	---	---	45	---	6	---	1	---	1	1	85
Total	669	2	24	2	2	1	2	1	1	1	1	265	2	68	2	18	3	5	3	1,072

Number of meters in use January 1st, 1905 16,026
Total number of meters set during 1905 1,072

Total number of meters in use January 1st, 1906 17,098

SPECIAL SERVICE CONNECTIONS

FROM JAN. 1, 1905, TO DEC. 31, 1905.

MONTH.	1½ in.	2 in.	3 in.	4 in.	6 in.		Total.
January	----	1	----	3	----	----	4
February	----	----	----	1	----	----	1
March	----	2	1	1	1	----	5
April	----	3	----	----	1	----	4
May	----	4	2	1	----	----	7
June	2	3	----	----	----	----	5
July	----	7	----	1	----	----	8
August	----	2	----	----	2	----	4
September	----	1	----	----	----	----	1
October	----	10	----	----	2	----	12
November	----	3	3	1	2	----	9
December	----	7	2	1	2	----	12
Total	2	43	8	9	10	----	72

HYDRANT STATEMENT.

FOR THE YEAR ENDED DECEMBER 31, 1905.

LOW SERVICE.

Month	No.	LOCATION	Diam.	Hyd.	St'ps
April	1	Vroom's Alley, west side, middle of block, between Franklin and Walnut Sts.	6"	1	1
	2	N. W. Cor. W. Kinney and Broad Sts.	6"	1	1
	3	S. E. Cor. W. Kinney and Beecher Sts.	6"	1	1
May	4	N. W. Cor. N. J. R. R. Ave. and Oliver St.	6"	1	1
	5	N. J. R. R. Ave., west side, middle of block, bet. Chestnut and Pennington Sts.	6"	1	1
June	6	S. W. Cor. Manufacturer's Place and Ferry St.	6"	1	1
	7	N. E. Cor. Van Buren and Warwick Sts.	6"	1	1
	8	North Side Bonykamper Ave., at dead end west of Brill St.	6"	1	1
Sept.	9	N. E. Cor. Pine and North Canal Sts.	6"	1	1
Oct.	10	N. E. Cor. Ferry and Lockwood Sts.	6"	1	1
	11	Ferry St., north side, 280 ft. east of Lockwood St.	6"	1	1
	12	Ferry St., north side, 475 ft. east of Lockwood St.	6"	1	1
	13	Ferry St., north side, 350 ft. west of Blanchard St.	6"	1	1
	14	N. W. Cor. Lockwood St. and Euclid Ave	6"	1	1
	15	S. W. Cor. Lockwood and Lister Ave.	6"	1	1
Nov.	16	N. W. Cor. N. J. R. R. Ave. and Miller St.	6"	1	1
	17	Brown St., north side, east of Dock St., at dead end	6"	1	1
Dec.	18	N. W. Cor. Summer Ave. and Montclair R. R.	6"	1	1
	19	Avenue D, west side, about 100 ft. north of Murray St.	6"	1	1

HIGH SERVICE.

April	20	N. E. Cor. Noll Place and Richelieu Terrace (Vailsburgh)	6"	1	1

Month	No.	Location	Diam	Hyd.	St'ps.
	21	N. W. Cor. Seymour and Custer Aves...	6"	1	1
	22	Eckert Ave., north side, at dead end, 300 ft. west of Seymour Ave.....	6"	1	1
	23	Buffington Ave., north side, west of Fabyan Place, at City Line	6"	1	1
May	24	Clifton Ave., west side, north of Heller Parkway	6"	1	1
	25	S. W. Cor. Montgomery and Avon Aves.	6"	1	1
	26	Montgomery Ave., west side, at dead end, south of Avon Ave	6"	1	1
	27	N. E. Cor. 18th Ave and South 20th St..	6"	1	1
	28	N. W. Cor. Hunterdon and Bigelow Sts.	6"	1	1
	29	S. E. Cor. Badger Ave. and Bigelow St.	6"	1	1
June	30	N. W. Cor. 17th Ave. and S. 15th St..	6"	1	1
	31	Willoughby St., west side, between Forrest Place and Lyons Ave	4"	1	1
	32	S. W. Cor. Willoughby St. and Shaw Ave	4"	1	1
	33	S. W. Cor. Wall St. and Hillside Road (Vailsburgh)	4"	1	1
July	34	N. W. Cor. 13th Ave and Grove St.....	6"	1	1
	35	N. E. Cor. Cliff Hill Place and Woodside Ave. (Vailsburgh)	4"	1	1
	36	S. W. Cor. Ridge St. and Third Ave.	6"	1	1
	37	Ridge St., west side, middle of block, bet. 2nd and 3rd Aves	6"	1	1
	38	Hunterdon St., west side, bet. Avon and Madison Aves	6"	1	1
Aug.	39	N. W. Cor. Abbotsford and Derby Sts. (Vailsburgh)	4"	1	1
Sept.	40	N. E. Cor. Millington Ave. and Clinton Place	6"	1	1
Oct.	41	S. W. Cor. Baldwin and Avon Aves.	6"	1	1
	42	Baldwin Ave., west side, middle of block, bet. Clinton and Madison Aves	6"	1	1
	43	S. W. Cor. Baldwin and Madison Aves.	6"	1	1
	44	S. 11th St., west side, middle of block, bet. 17th and 18th Aves	6"	1	1
	45	S. E. Cor. Avon and Seymour Aves.....	6"	1	1
	46	N. W. Cor. S. 17th St. and 15th Ave...	6"	1	1
	47	South 17th St., west side, middle of block, bet. 14th and 15th Aves	6"	1	1
	48	N. W. Cor. Bergen St. and Custer Ave.	6"	1	1
Nov.	49	S. W. Cor. Mercer and Broome Sts....	6"	1	1
	50	Scheerer Ave., north side, 250 ft. west of Renner Ave	6"	1	1

Month	No.	LOCATION	Diam.	Hyd:	St'ps.
	51	N. E. Cor. Renner Ave. and Hunterdon St.	6"	1	1
	52	Renner Ave., north side, 400 ft. east of Hunterdon St.	6"	1	1
	53	N. W. Cor. Hunterdon St. and Shephard Ave.	6"	1	1
	54	Shephard Ave., north side, opp. Mapes Pl.	6"	1	1
Dec.	55	Hunterdon St., west side, middle of block, bet. Bigelow and Runyon Sts.	6"	1	1
	56	N. W. Cor. North 2nd St. and Grafton Ave.	6"	1	1

HYDRANTS REPLACED DURING THE YEAR 1905.

LOW SERVICE.

Month	No.	Location	Diam.	Hyd.	St'ps.
Jan.	1	N. E. Cor. Elm Road and Napoleon St.	4"	1	1
	2	Passaic St., west side, middle of block, bet. Oriental St. and Third Ave.	4"	1	1
Feb.	3	N. E. Cor. Broad and Chestnut Sts.	4"	1	
April	4	S. E. Cor. South and Sandford Sts.	4"	1	
	5	N. W. Cor. W. Kinney and Halsey Sts.	6"	1	1
May	6	S. E. Cor. N. J. R. R. Ave. and Walnut St.	4"	1	
	7	Chestnut St., north side, west of Hermon St.	4"	1	1
	8	Junction of Providence and Read Sts.	4"	1	1
June	9	S. E. Cor. William St. and Chapel Court	4"	1	1
	10	N. W. Cor. Mulberry and Astor Sts.	4"	1	1
	11	N. E. Cor. Nursery St. and Summer Ave.	4"	1	
	12	N. W. Cor. E. Kinney and Adams Sts.	4"	1	1
	13	Ferry St., north side, opp. Vincent St.	6"	1	1
	14	Ferry St., north side, opp. No. 575	6"	1	1
	15	S. W. Cor. Boyden St. and M. & E. R. R. Ave.	4"	1	1
	16	N. W. Cor. Ferry and Waydell Sts.	6"	1	1
Aug.	17	Lackawanna Ave., south side, bet. High and Plane Sts.	6"	1	1
Sept.	18	S. W. Cor. N. Canal and Mulberry Sts.	6"	1	1
	19	S. E. Cor. 7th Ave. and Sheffield St.	4"	1	
Oct.	20	N. E. Cor. Ferry and Foundry Sts.	6"	1	1
	21	N. E. Cor. Ferry and Lockwood Sts.	4"	1	1
Nov.	22	S. E. Cor. Broad and Fulton Sts.	6"	1	
	23	N. E. Cor. N. J. R. R. Ave. and Miller St.	6"	1	1
	24	S. W. Cor. Alling and Market Sts.	4"	1	
	25	N. E. Cor. Van Buren and Market Sts.	4"	1	
Dec.	26	N. W. Cor. Mulberry and Boudinot Sts.	6"	1	

HIGH SERVICE.

Month	No.	Location	Diam.	Hyd.	St'ps.
Jan.	27	N. E. Cor. Central Ave. and Jay St.	4"	1	1
	28	Jay St., east side, bet. Sussex Ave. and Orange St.	4"	1	
	29	S. W. Cor. Badger and Madison Aves.	4"	1	

Month	No.	LOCATION	Diam.	Hyd.	St'ps
Feb.	30	Hunterdon St, west side, middle of block, bet. 13th and S. Orange Aves.....	4"	1	
	31	Gould Ave., north side, bet. S. 14th and S. 15th Sts.	4"	1	1
March	32	N. E. Cor. Clinton and Farley Aves....	4"	1	
May	33	Monmouth St., west side, bet. Montgomery and Spruce Sts.	4"	1	
June	34	N. W. Cor. 16th Ave. and S. 10th St..	6"	1	1
	35	N. W. Cor. Hunterdon and Rose Sts....	6"	1	1
	36	S. W. Cor. Jacob St. and 16th Ave.....	6"	1	1
	37	N. W. Cor. S. 8th St. and 16th Ave.....	6"	1	1
	38	S. W. Cor. Nelson Place and High St..	6"	1	1
	39	S. W. Cor. N. 7th St. and Chester Ave..	4"	1	
	40	N. W. Cor. Summit and New Sts.....	4"	1	1
	41	Summit St., west side, bet. Summit Place and New St.	4"	1	1
	42	Summit St., west side, north of Morris Canal	4"	1	1
	43	N. E. Cor. 16th Ave. and S. 17th St....	4"	1	1
July	44	N. W. Cor. S. Orange Ave. and S. 11th St.	4"	1	1
	45	N. Sandford St., at dead end at East	4"	1	1
		Orange Township Line.....	4"	1	1
	46	S. E. Cor. 2nd Ave. and Ridge St.....	4"	1	1
	47	S. W. Cor. Winans Ave. and Bergen St..	4"	1	1
Oct.	48	N. W. Cor. S. 11th St. and 14th Ave....	4"	1	1
	49	S. W. Cor. 5th and Orange Sts.....	4"	1	1
Nov.	50	N. W. Cor. Avon Ave. and Barclay St..	6"	1	1

Statement of Hydrants located in Vailsburgh.

(Annexed).

Location.

1	Franklin St., west side, about 400 ft. south of Rose St.	4"	Corey.
2	S. W. Cor. Franklin St. and S. Orange Ave.	4"	"
3	Madison Ave., west side, 500 ft. south of Rose St.	4"	"
4	S. W. Cor. Madison Ave. and S. Orange Ave.	4"	"
5	S. W. Cor. Freeman and Rose Sts.	4"	"
6	S. W. Cor. Freeman St. and S. Orange Ave.	4"	"
7	Richelieu Terrace, west side, 500 ft. south of Rose St.	4"	"
8	S. W. Cor. Richelieu Terrace and S. Orange Ave.	4"	"
9	Hazelwood Ave., west side, 250 ft. south of Fortuna St.	4"	"
10	S. Sandford St., east side, opp. Netherwood Place	4"	"
11	S. Sandford St., east side, bet. Lexington Ave. and College Place	4"	A. P. Smith.
12	S. Sandford St., east side, at Lexington Ave.	4"	"
13	S. Sandford St., east side, opp. Nolls Place	4"	R. D. Wood.
14	S. Sandford St., east side, opp. Fortuna St.	4"	"
15	Smith St., east side, north of 17th Ave.	4"	Corey.
16	N. E. Cor. Smith St. and Hillside Ave.	4"	"
17	Smith St., east side, north of Campbell Place	4"	"
18	S. E. Cor. S. Orange Ave. and Smith St.	4"	"
19	Beach St., east side, south of Hillside Ave.	4"	R. D. Wood.
20	Wall St., west side, near Township Line	6"	Corey.
21	Wall St., west side, south of Lexington Ave.	6"	"
22	Wall St., west side, south of Lexington Ave.	6"	"
23	S. W. Cor. Wall St. and 17th Ave.	6"	"
24	Wall St., west side, bet. 17th and Hillside Aves.	6"	"
25	Wall St., west side, north of Campbell Place.	4"	"
26	S. W. Cor. Wall St. and S. Orange Ave.	4"	"
27	Kenmore Ave., north side, at E. Orange Township Line	4"	"
28	Kenmore Ave., north side, middle of block, bet. N. Sandford St. and Vail St.	4"	"
29	Finley Place, north side, at E. Orange Township Line	4"	"

	LOCATION		
30	N. W. Cor. Finley Place and Vail St.....	4"	Corey.
31	N. W. Cor. Lenark and Vail Sts.....	4"	"
32	N. W. Cor. N. Sandford St. and S. Orange Ave.	4"	"
33	S. W. Cor. N. Sandford St. and Marion Ave.	4"	"
34	N. Sandford St., west side, north of Finley Place	4"	"
35	N. Sandford St., west side, at E. Orange Township Line	4"	"
36	Bedford St., west side, north of N. Sandford St.	4"	"
37	Bedford St., west side, in front of No. 69..	4"	"
38	Bedford St., west side, south of E. Orange Township Line	4"	"
39	Bedford St., west side, at E. Orange Township Line	4"	"
40	Crawford St., west side, in front of No. 45.	4"	"
41	Crawford St., west side, in front of No. 95...	4"	"
42	Crawford St., west side, at E. Orange Township Line	4"	"
43	Halsted St., west side, in front of No. 35.....	4"	"
44	Halsted St., west side, at dead end.....	4"	"
45	Norwood St., east side, south of S. Orange Ave.	4"	"
46	Norwood St., east side, middle of block, bet. S. Orange Ave. and Abinger Place.....	4"	"
47	Norwood St., east side, south of Abinger Pl.	4"	"
48	S. W. Cor. Clinton St. and S. Orange Ave..	4"	"
49	Clinton St., west side, middle of block, bet. S. Orange Ave. and Abinger Place.....	4"	"
50	Clinton St., east side, south of Abinger Place	4"	"
51	S. W. Cor. S. Orange Ave. and Boylan St...	4"	"
52	Boylan st., east side, south of S. Orange Ave.	4"	"
53	Sunset Ave., west side, south of S. Orange Ave.	4"	"
54	Sunset Ave., west side, opp. Alley.....	4"	"
55	Sunset Ave., west side, south of Alley.....	4"	"
56	S. W. Cor. Burnet St. and S. Orange Ave..	4"	"
57	Burnet St., west side, middle of block, bet. S. Orange Ave. and Alley.....	4"	"
58	Burnet St., west side, south of Alley.....	4"	"
59	Burnet St., west side, at dead end.....	4"	"
60	South Orange Ave., south side, west of West End Ave.	4"	"

	LOCATION		
61	N. E. Cor. Park St. and S. Orange Ave.....	4"	Corey.
62	N. W. Cor. Munn Ave. and S. Orange Ave...	4"	"
63	Munn Ave., west side, north of Mountain View Ave.	4"	"
64	S. W. Cor. Munn Ave. and Tremont St.....	4"	"
65	Munn Ave., west side, at E. Orange Township Line	4"	"
66	South Orange Ave., south side, east of Munn Ave.	4"	"
67	South Orange Ave., south side, west of Myrtle Ave.	4"	"
68	Myrtle Ave., west side, at Irvington Township Line	4"	"
69	Myrtle Ave., west side, middle of block, bet. 15th and Roseville Aves.	4"	"
70	15th Ave., north side, at dead end.....	4"	"
71	15th Ave., north side, east of Myrtle Ave....	4"	"
72	S. W. Cor. Maple and Rodwell Aves.....	4"	"
73	14th Ave., north side, at Irvington Township Line	4"	"
74	N. E. Cor. 14th Ave. and Myrtle Ave.....	4"	"
75	Maple Ave., west side, opp. Dassing Ave....	4"	"
76	Dassing Ave., south side, at Irvington Township Line	4"	"
77	S. E. Cor. S. Orange Ave. and Maple Ave....	4"	"
78	S. Orange Ave., south side, west of S. Grove St.	4"	"
79	South Grove St., west side, south of S. Orange Ave.	4"	"
80	21st St., west side, at Irvington Township Line	4"	"
81	S. Orange Ave., south side, opp. S. 20th St...	4"	"
82	S. W. Cor. Grove and Ruth Sts.....	4"	"
83	N. E. Cor. Grove St. and 13th Ave.....	4"	"
84	Grove St., west side, north of Grain St.....	4"	"
85	Grove St., west side, at dead end.....	4"	"
86	N. E. Cor. Monmouth Place and West End Ave.	4"	A. P. Smith.
87	N. E. Cor. Howell Place and West End Ave.	4"	"
88	S. W. Cor. Park Place and Washington Ave.	4"	"
89	S. W. Cor. Arlington Ave. and Laurel Place.	4"	"
90	N. W. Cor. Arlington Ave. and Monmouth Place	4"	"
91	S. W. Cor. Arlington Ave. and S. Orange Ave	4"	"

	LOCATION		
92	Isabella Ave., west side, south of Monmouth Place	4"	A. P. Smith.
93	Isabella Ave., west side, middle of block, bet. S. Orange Ave. and Monmouth Place	4"	"
94	S. W. Cor. Isabella Ave. and S. Orange Ave.	4"	"
95	Columbia Ave., west side, south of Monmouth Place	4"	"
96	Columbia Ave., west side, south of S. Orange Ave.	4"	"
97	Munn Ave., west side, south of Monmouth Place	4"	"
98	Munn Ave., middle of block, bet. S. Orange Ave. and Monmouth Place	4"	"
99	S. W. Cor. Munn Ave. and S. Orange Ave.	4"	"

RECAPITULATION.

New hydrants set on Low Service	19
New hydrants set on High Service	37
New hydrants replacing old on Low Service	26
New hydrants replacing old on High Service	24
	106

The total number of hydrants connected with the works at the end of the year was:

In the city on Low Service	1,104
In the city on High Service	1,317
and 102 on account of annexation of Vailsburgh, including Columbia Heights	102
Total in the city	2,523
At the Belleville Pump House	0
Township of Belleville	2
Total	2,525

SUMMARY OF STATISTICS OF THE NEWARK, N. J., WATER WORKS FOR THE YEAR ENDING DECEMBER 31, 1905.

In Form Recommended by the New England Water Works Association.

GENERAL STATISTICS.

Population by census, 1905 283,000
Date of Construction 1889-1891
By whom owned ..... City of Newark
Source of Supply ..... Pequannock River
Mode of Supply ..... Gravity

STATISTICS OF CONSUMPTION OF WATER.

Estimated total population at date 295,000
Estimated population on lines of pipe 295,000
Estimated population supplied 295,000
Total consumption for the year ..... 11,800,700,000 gallons
Passed through meters ..... 3,920,464,660 gallons
Percentage of consumption metered 33%
Average daily consumption ..... 32,525,000 gallons
Gallons per day to each inhabitant 110
Gallons per day to each consumer 110
Gallons per day to each tap 812
Cost of supplying water, per million gallons, figured on total maintenance $17.94
Total cost of supplying water, per million gallons, figured on total maintenance + interest on bonds $71.24

STATISTICS REGARDING DISTRIBUTION SYSTEM.

MAINS.

Kind of pipe	cast iron and steel
Sizes, from	4 inch to 60 inch
Extended	33,594 feet during the year
Discontinued	10,000 feet during the year
Total now in use	331½ miles
Cost of repairs per mile	$1.25
Number of leaks per mile	0.09
Length of pipes less than 4 inches diameter	¼ mile
Number of hydrants added during year (public and private)	56
Number of hydrants (public and private) now in use	2,523
Number of stop gates added during year	129
Number of stop gates now in use	4,315
Number of stop gates smaller than 4 inch	6
Range of pressure on mains	25 lbs. to 75 lbs.

SERVICES.

Kind of pipe	lead and cast iron
Sizes	⅝ inch to 6 inch
Extended	26,000 feet
Total now in use	150 miles
Number of service taps added during year	1,287
Number now in use	39,993
Average length of service	20 feet
Average cost of service for the year	$14.00
Number of meters added	1,072
Number now in use	17,098
Percentage of services metered	44%
Percentage of receipts from metered water	66.4

FINANCIAL STATISTICS.

RECEIPTS.

Balance brought forward from receipts		$132,051.38
From water rates—		
Fixture rates	$283,703.20	
Meter rates	562,216.57	
Total from consumers		845,919.77
For hydrants	free	
" fountains	free	
" street watering	free	
" public buildings	free	
" miscellaneous uses	$30,543.06	
Total from municipal dept's.....	7,602.97	
From bond issue	50,000.00	
" other sources	61,208.90	
		149,354.93
Total		$1,127,326.08

EXPENDITURES.

Operation (management and repairs)		$213,007.67
Interest on bonds	$428,446.10	
Payment of bonds	10,000.00	
Sinking fund	203,900.00	
		642,346.10
Water Works Construction—		
Extension of mains	$100,736.34	
" " services	31,435.95	
" " meters	13,358.74	
Total construction		$145,531.03
Unclassified expenses—		
Repair meters, handling material, etc.....		11,358.95
Balance		115,082.33
Total		$1,127,326.08

Disposition of balance—

Net cost of works to date (less old plant charged off)	$11,000,000.00
Bonded debt at date (including refunded debt)	12,007,000.00
Value of Sinking Fund at date	2,717,708.25
Average rate of interest, per cent	3.933%

FINANCIAL STATEMENTS

ACCOUNTING DIVISION.

Department of Water.

YEAR ENDED DECEMBER 31ST, 1905.

NEWARK, N. J. March 1st, 1906.

To the Board of Street and Water Commissioners.

GENTLEMEN:—I herewith submit Financial Statements and Trial Balance of the Department of Water for the year ended December 31st, 1905.

Respectfully yours,

HENRY D. NORTHROP,

Cashier.

RECEIPTS FOR 1905.

Balance, January 1st, 1905		$132,051.38
Advance Water Rent Colection	$283,703.20	
Hose Water Rent Collection	2,103.00	
Fractional Water Rent Collection	903.67	
Sprinkler Rent Collection	2,617.84	
Building Rent Collection	7,074.49	
Special Water Rent Collection	2,676.57	
Arrears Water Rent Collection	10,457.42	
Measured Water Rent Collection	562,216.57	
Service Collection Account	19,515.01	
Sales on Service Account	55.25	
Penalties and Fines	374.26	
Rents, Real Estate	1,472.00	
Sundry Personal Accounts	44,530.23	
Vailsburgh Water Rent Collection	1,366.29	
		939,065.80
Bond for Extension Street Mains	$50,000.00	
Accrued Interest on New Storage Reservoir Bonds	6,208.90	
		56,208.90
Total		$1,127,326.08

DISBURSEMENTS FOR 1905.

Addressograph Supplies		$140.79
Monthly Pay Roll		49,450.42
Weekly Pay Roll		162,035.13
Registered Bond Interest	$281,030.00	
Coupon Bond Interest	114,200.00	
		395,230.00
Vailsburgh Bond Interest		1,800.00
High Pressure Bond Interest		3,500.00
New Storage Reservoir Bond Interest		34,125.00
Sinking Fund		203,900.00
Horse Shoeing		387.77
Legal Services, Searching Titles, &c		254.75
General Supplies		2,680.82
Printing and Stationery		2,873.21
Coal and Wood		942.28
Loss and Gain—Refund		258.31
Hay, Feed and Oats		1,485.13
Lead Pipe		5,912.63
Gasolene and Kerosene		886.59
Boarding Horses		1,469.94
Inspection of Water Pipes		300.83
Freight		285.12
Veterinary		5.00
Insurance		1,023.63
Engineer's Supplies		325.40
Extra Time—Labor		671.58
Curb and Corporation Stops		3,180.43
Plumbers' and Service Supplies		1,300.05
Paint and Supplies		675.85
Ice		105.05
Harness Repairing		390.65
Lumber		2,497.11
Stable Supplies		355.28
Castings		5,817.89
Electric Repairs		270.20
Taxes		1,485.75
Telephone Service		913.00
Water Meters		10,713.30

Meter Repair Parts	$1,292.35
Hydrants	6,706.50
Hydrant Repair Parts	319.15
Blacksmithing—Repairing Tools	1,487.60
Drugs	21.80
Mason Materials	2,053.34
Valves	7,341.77
Repaving Street Cuts	3,166.13
Water Hose	437.89
Electricity—Light and Power	342.48
Steel and Cast Iron Pipe	34,265.82
Petty Expenses:—	
Engineering Department	1,815.91
Accounting Division	1,266.99
Wagon Repairs	1,332.32
Maps	218.90
Water Keys	107.25
Extra Water for Vailsburgh	1,418.88
Jute	275.83
Rubber Boots	622.20
Solder	478.44
Relocating Gas Mains	114.68
Gas	244.70
Coke	35.00
Adding Machine	375.00
Incidental Expenses	28.20
Truck Hire	2,044.82
Pig Lead	7,012.93
Real Estate Expert—Valuation	20.00
High Pressure Supplies	92.98
West End Land and Improvement Co.'s Water System	10,858.38
Land for Water Shed	20,450.00
Clay Pipe	67.14
New Tools	51.00
Office Furniture	131.00
Extra Heavy Service Stock	103.31
Telephone Co.—Removing Conduits for H. Pressure	100.40
Curb and Stop Boxes	2,852.49
Horse and Wagon Hire	239.50
General Expenses and Repairs	561.13
Board and Lodgings	138.80
Plants and Bulbs	360.90
Advertising	123.15
Rent	250.00

Gasoline Furnace	$138.75
Tapping Machine	116.51
New House—South Orange Ave. Reservoir	2,690.00
New Wagons	525.31
New Boats	44.00
Machinery and Labor Hoisting Pipe	109.32
New Horse	225.00
Flag	6.25
Total	$1,012,243.75

COMPARATIVE STATEMENT OF DISBURSEMENTS.

1904 and 1905.

Street and Main Extension	$21,354.55	$39,125.88
Feeders	787.79	40,039.12
Reconstruction	3,422.84	7,893.68
General Maintenance and Repairs	11,327.48	15,563.39
Repair of Tools	955.31	1,308.25
General Expense	7,115.84	6,666.44
Handling Material	1,206.44	1,667.77
Engineer and Supt., Expense	11,689.02	10,402.82
Accounting Division, Expense	29,022.11	32,104.56
Meter Division, Expense	14,977.61	15,134.60
Distributing Reservoirs	6,354.72	6,770.49
Meter Repairs	4,220.84	5,457.12
Repair, Department Meters	2,638.95	1,337.60
Repair, Belleville Reservoir	63.61	24.40
Repair, S. Orange Ave. Reservoir	462.72	2,845.91
Repair, Services	25,395.34	10,630.71
Repair, Hydrants and Setting	7,668.50	10,221.05
Inspection	12,212.90	13,128.83
Stable Expense	6,607.82	5,127.19
Service Account	20,656.18	23,590.73
Pumping Stations	2,501.70	2,392.00
Maintenance New Water Supply	21,353.14	14,920.46
Miscellaneous Personal Charges	5,964.84	7,060.44
Stable Stock and Fixtures	665.00	225.00
Office Furniture	171.60	571.35
New Meters	13,907.38	10,714.80
New Hydrants	1,832.50	3,061.50
Insurance	.....	1,023.63
General Supplies	2,550.89	3,125.13
New Tools	572.69	13.45
Repair, Street Mains	815.33	4,139.10
Land for New Water Supply	.....	20,450.00
Sinking Fund	174,600.00	203,900.00
Interest on Water Bonds	403,155.00	428,446.10
New Storage Reservoir	576.07	884.05
Loss and Gain, Refunding, etc	815.29	655.09

Miscellaneous, Material, etc.	$103,760.25	$14,280.59
Track Elevation	.....	1,161.51
High Pressure Water System	.....	34,065.36
Maintenance New Storage Reservoir	.....	2,855.94
Maintenance Conduits	.....	8,999.32
Maintenance Reservoir	.....	258.39
Total	$921,382.25	$1,012,243.75

Accounts Receivable.

December 31st, 1905.

Advance Water Rent Account	$13,887.85
Fractional Water Rent Account	907.59
Measured Water Rent Account	45,886.73
Special Water Account	892.23
Building Water Account	322.93
Arrears Water Rent Account	4,783.49
Service Collection Account	792.00
Sundry Personal Accounts	64,888.72
Total	$132,361.54

Trial Balance.

December 31st, 1905.

Cash	$115,082.33	
Construction	4,433,603.06	
High Pressure Water Bonds	.....	$100,000.00
Coupon Bond Account	.....	2,710,000.00
Registered Bond Account	.....	7,217,000.00
New Storage Reservoir Bond Account	.....	1,950,000.00
Stable Stock and Fixtures	6,680.50	
Petty Cash	306.07	
Office Furniture, Fixtures and Fittings	11,276.01	
Water Meter Account	2,780.87	
Department Meters	27,366.00	
Hydrant Account	424.00	
Insurance	1,023.63	
Street Mains, Stock and Material	26,035.87	
Service Stock	2,822.61	
Real Estate, General	104,768.09	
Tool Account	15,136.25	
Meter Repair Stock	1,903.03	
High Pressure Water System	120,599.07	
Surplus and Deficiency	663,078.55	
New Water Supply	6,194,519.41	
Service Collection	792.00	
Advance Water Rent Collection	13,887.85	
Fractional Water Rent Collection	907.59	
Building Collection	322.93	
Special Water Collection	892.23	
Measured Water Collection	45,886.73	
Arrears Water Rent Collection	4,783.49	
Sundry Personal Collection	64,888.72	
Cedar Grove Reservoir, Stock & Fixtures	2,236.06	
Track Elevation	1,579.51	
New Storage Reservoir, Material Acct.	884.05	
New Storage Reservoir, Construction Account	112,533.49	
Total	$11,977,000.00	$11,977,000.00

Assets and Liabilities.

Cash Balance, December 31st, 1905.....	$115,082.33	
Property	10,952,364.58	
Accounts Receivable	132,361.54	
Track Elevation Account	1,579.51	
New Storage Reservoir Construction Account	112,533.49*	
Coupon Bonds	.....	$2,710,000.00
Registered Bonds	.....	7,217,000.00
High Pressure Water Bonds	.....	100,000.00
New Storage Reservoir Bonds	.....	1,950,000.00
Surplus and Deficiency	663,078.55	
Total	$11,970,000.00	$11,970,000.00

Schedule of Property, 1905.

Department of Water.

Belleville Pumping House	$25,000.00
" Boiler House Extension.....	2,000.00
" Engineer & Firemen's Dwelling..	10,000.00
" New Chimney	5,500.00
" Keeper's House	1,500.00
" Pumping Engine No. 1.....	5,000.00
" " " No. 2.....	5,000.00
" " " No. 3.....	15,000.00
" " " No. 4.....	20,000.00
" Receiving Reservoir	130,972.15
" New Boilers	15,038.31
River Wall Dock and Basin	25,000.00
Driven Wells	22,275.01
Drilled Wells	30,172.08
Cisterns Wells	2,453.80
Belleville Reservoir Appurtenances	8,508.03
High Service Engine House	15,000.00
High Service Engine House Extension	2,500.00
New [illegible] Avenue	2,000.00
High Service Pumping Engine No. 2	5,000.00
High Service Pumping Engine No. 3	5,000.00
High Service Reservoir, S. Orange Ave.	92,003.57
High Service Reservoir	110,183.37
Service Mains, Connections, 1904 $[illegible]	
" " 1905 [illegible]	
	1,447,130.88

Pumping Main No. 1		73,876.98	
Pumping Main No. 2		37,798.39	
Supply Main No. 1		121,125.79	
Supply Main No. 2		65,169.55	
Supply Main No. 2, Section A		39,909.94	
Distributing Main No. 2		50,776.14	
Extra High Service Main		26,903.62	
Twelfth Ward Feeder		5,708.59	
Ingraham Place Feeder		1,124.28	
Bridge Street Feeder		1,791.60	
Regular High Service Feeder No. 2		17,597.75	
Regular High Service Feeder No. 2, Extension		9,735.56	
Forest Hill Feeder		5,500.67	
Roseville Feeder		18,573.94	
Seventh Avenue Feeder		4,166.37	
South Street Feeder		2,057.19	
Fourteenth Avenue Feeder		4,302.55	
Ferry Street Feeder		6,047.98	
South Ninth Street Feeder		662.00	
Fourteenth Street Feeder		1,367.25	
Waverley Avenue Feeder		763.34	
Hawthorne Avenue Feeder		668.13	
Verona Avenue Feeder		1,528.80	
Special High Service Feeder		954.81	
Feeders, 1904	$14,319.35		
1905	40,089.12		
		54,408.47	
Distributing Main No. 2, Extension		3,825.90	
Distributing Main No. 1		47.76	
High Service Main No. 1		45.91	
High Service Main No. 2		18,260.69	
Low Service Supply Main No. 3		1,089.95	
Weir at Water Shed		866.64	
New Storage Reservoir, Material Acct.		884.05	
			$2,596,078.02

REAL ESTATE

No. 1.	No. 128 Halsey Street	$ 26,964.15
" 5.	Nominal	100.00
" 6.	Seventh and Summer Aves.	4,000.00
" 12.	Ground and Building, New City Stables	26,958.47
" 13.	Right of Way and Alley, Millbrook Sewer	75.00

" 14. Drift St., at Factory St., Nominal..	$20.00	
" 16. Clifton Avenue Pump House.....	6,000.00	
" 18. Low Service Reservoir, Nominal..	1.00	
" 62. Hecker Street, Nominal	100.00	
" 53. S. Orange Ave. Reservoir, Nominal	1.00	
" 54. Corner 14th Ave. & Ninth Street..	4,975.00	
" 55. Corner 14th Ave. & Eighth Street..	7,500.00	
" 56. Belleville Pump House and Six Houses	11,883.64	
" 57. Opposite Pump House	1 693.92	
" 58. Belleville Reservoir, Nominal	1.00	
" 59. Part of Belleville Reservoir Prop..	532.50	
" 60. Back of Belleville Reservoir Prop	11,113.86	
" 61. Portion, Right of Way, Supply Main No. 2	450.00	
" 62. Portion, Right of Way, Supply Main No. 2	339.00	
" 63. Portion, Right of Way, Supply Main No. 2	389.55	
Land for Drilled Wells, Belleville, N. J...	1,670.00	
		$104,768.09

INVENTORY

Street Mains, Stock and Material.....$	26,035.87	
Service, Stock and Material	2,822.61	
Hydrants on Hand	424.00	
Water Meters on Hand	2,789.87	
Meter Repair Stock	1,903.03	
Tools	15,136.25	
Stable Stock and Fixtures	6,689.50	
Office Furniture, Fixtures & Fittings....	11,276.01	
Cedar Grove Reservoir	2,236.06	
Petty Cash	306.07	
Water Meters owner and set by Dept...	27,366.00	
Insurance	1,023.63	
High Pressure Water System Stock	13,164.84	
		111,155.74
New Water Supply	6,194,519.41	
New Storage Reservoir	1,837,466.50	
High Pressure Water System	107,434.23	
		8,139,420.14
Total		$8,250,575.88

Expended on Account of New Storage Reservoir and Thirty-Six Inch Cast Iron High Service Supply Pipe Line.

To December 31st, 1905.

NEW STORAGE RESERVOIR, TUNNEL AND SIXTY INCH STEEL PIPE LINE.

Labor	$57,765.81	
Iron Pipe and Castings	82,247.33	
Inspecting Pipe	1,054.22	
Payments on Contracts	1,202,920.18	
Engineering Expense, &c	30,578.11	
Interest on Loan	119,159.25	
Taxes	56.73	
Land	93,689.39	
Right of Way	1,550.00	
Expense of Condemnation	3,890.95	
Gate House	16,001.00	
Building Sewer by Town of Bloomfield	1,750.00	
Payment on Contract for Outlet Tunnel	11,777.88	
		1,622,440.85
THIRTY-SIX INCH SUPPLY PIPE LINE, Between South Orange Avenue and Belleville Reservoir.		
Labor	$44,353.81	
Iron Pipe and Castings	95,978.19	
Interest on Loan	37,884.77	
Inspecting Pipe	1,000.91	
Carting Pipe	3,729.95	
Right of Way	3,450.00	
Caulking Machine	490.00	
Miscellaneous Material	25,304.90	
Work at Second River and South Orange Avenue and Eighth Street	920.12	
Expenses	2,071.00	
		215,183.65
Total		$1,837,624.50
Less Hay sold in 1901		158.00
		$1,837,466.50

Fund for the Construction of a Storage Reservoir.

December 31st, 1905.

CASH ACCOUNT.

Balance, January 1st, 1905		$1,007.78
Interest on Investment	$3,500.00	
Rents, Real Estate	225.00	
		3,725.00
Total Receipts for 1905		$4,732.78
Society Land Co., 253 Acres Land in Pequannock Water Shed	$3,250.00	
		3,250.00
Balance to Credit of Account with City Treasurer, December 31st, 1905		$1,482.78

TRIAL BALANCE.

Cash	$1,482.78	
Bond Account	50,000.00	
Ivy Hill Property	81,828.40	
Belleville Property	13,965.35	
Charlottesburgh Property	50,670.07	
Storage Reservoir Account		$197,946.60
	$197,946.60	$197,946.60

REAL ESTATE AND SECURITIES.

Registered Newark City Water Bond No. 28	$50,000.00
Ivy Hill Property, South Orange, N. J.	81,828.40
Belleville, N. J., property	13,965.35
Charlottesburgh, N. J., Property	50,670.07
Total	$196,463.82

Month.	Date of Act.	Year of Issue.	Title.	When Due.	Rate of Interest. Per cent.	Amount.	Rate of Sinking Fund. Per cent.	Yearly Interest.	Interest Due.	Annual Sinking Fund Payments.	Amount in Sinking Fund Nov. 30, 1905.
April 21	1876	1877	Water.	1906	7%	$50,000.00	None.	$3,500.00	Feb. and Aug.	----------	----------
" 21	1876	1879	"	1909	5%	100,000.00	"	5,000.00	May " Nov.	----------	----------
March 6	1884	Oct. 1, 1884	"	1914	4%	30,000.00	3% City Pays.	1,200.00	April " Oct.	City Pays.	28,460.23
" 6	1884	Feb. 1, 1885	"	1915	4½%	200,000.00	3% "	9,000.00	Feb. " Aug.	"	173,842.35
" 6	1884	Oct. 31, 1885	"	1915	4½%	15,000.00	3% "	675.00	May " Nov.	"	13,050.01
" 6	1884	Aug. 1, 1886	"	1916	4%	12,000.00	3% "	480.00	Feb. " Aug.	"	9,482.82
" 6	1884	April 1, 1887	"	1917	4%	15,000.00	3% "	600.00	April " Oct.	"	11,006.01
" 6	1884	March 1, 1888	"	1918	4½%	20,000.00	3% "	900.00	Mch. " Sept.	"	13,597.82
" 26	1888	Dec. 29, 1888	"	1908	4%	20,000.00	3% "	City Pays.	Tax Levy.	"	14,303.42
" 26	1888	Dec. 30, 1890	"	1910	4%	20,000.00	3% "	"	"	"	12,171.96
" 26	1888	Sept. 15, 1891	"	1911	5%	70,000.00	3% "	"	"	"	36,881.93
" 26	1888	Oct. 10, 1892	"	1912	4%	20,000.00	3% "	"	"	"	9,600.67
" 26	1888	Nov. 15, 1893	"	1913	4%	55,000.00	3% "	"	"	"	24,133.52
" 26	1888	Aug. 21, 1895	"	1915	4%	40,000.00	3% "	"	"	"	13,967.97
" 26	1888	Oct. 20, 1896	"	1916	4%	40,000.00	3% "	"	"	"	12,353.63
May 14	1889	Feb. 1, 1892	Funded Water Debt.	1922	4%	2,450,000.00	2% Water Dept.	98,000.00	Feb. and Aug.	49,000.00	784,053.63
" 14	1889	May 1, 1892	New Water Supply.	1922	4%	4,000,000.00	2% "	160,000.00	May " Nov.	80,000.00	1,494,602.51
" 14	1889	Nov. 1, 1900	"	1922	4%	2,000,000.00	2% "	80,000.00	May " Nov.	40,000.00	
" 14	1889	Aug. 1, 1897	Funded Water Debt.	1927	4%	100,000.00	2% "	4,000.00	Feb. " Aug.	2,000.00	17,993.81
" 18	1898	Oct. 18, 1899	Water.	1919	4%	20,000.00	3% "	800.00	Feb. " Aug.	600.00	3,918.67
" 18	1898	Aug. 1, 1900	"	1920	4%	20,000.00	3% "	800.00	April " Oct.	600.00	3,217.72
" 18	1898	Sept. 1, 1901	"	1921	4%	20,000.00	3% "	800.00	Mch. " Sept.	600.00	2,520.07
" 18	1898	Oct. 1, 1902	Street Main Extension.	1922	4%	30,000.00	3% "	1,200.00	April " Oct.	900.00	2,792.40
" 18	1898	July 1, 1903	"	1923	4%	30,000.00	3% "	1,200.00	Jan. " July	900.00	2,310.99
	1905	Aug. 1, 1904	High Pressure. 30 years.	1934	3½%	100,000.00	2% "	3,500.00	Feb. " Aug.	2,000.00	2,000.00
	1905	April 1, 1905	Cedar Grove Reservoir.	1955	3½%	1,950,000.00	1% "	68,250.00	April " Oct.	19,500.00	19,500.00
	1905	May 1, 1905	Street Main Extension	1925	4%	50,000.00	3% "	2,000.00	May " Nov.	1,500.00	1,500.00
	Renewal 1875	May 1, 1905	Water.	1955	3½%	490,000.00	1% "	17,150.00	May " Nov.	4,900.00	4,900.00
		Oct. 1, 1898	Vailsburgh Water Bond. 15 years.	1913	4½%	20,000.00	5% "	900.00	April " Oct.	1,000.00	3,758.07
		Oct. 1, 1898	Bond, 30 years.	1928	4½%	20,000.00	2% "	900.00	April " Oct.	400.00	1,779.04
						$12,007,000.00		$460,855.00		$203,900.00	$2,717,708.25

The Water Department pays both Interest and Sinking Fund on Bonds issued under Acts of 1875 (Renewal), 1889, 1898 and 1905 and the Interest on Bonds issued under the Acts of 1876 and 1884. These payments amounted to a total fixed charge for the year 1905 of $664,755.00.

The Water Department does not pay Interest or Sinking Fund on Bonds issued under the Act of 1888 nor Sinking Fund on Bonds issued under the Act of 1884. These payments are made from the tax levy and amount to $20,060.00 per year.

The last two items of $20,000.00 each are bonds issued by Vailsburgh, which the city assumed

REPORT OF
ENGINEER OF DEPARTMENT OF STREETS AND HIGHWAYS.

To the Chief Engineer of the Board of Street and Water Commissioners of the City of Newark, N. J.

DEAR SIR:—The following annual report of the Engineering division of the Department of Streets and Highways for the year ended December 31st, 1905, is herewith submitted, showing the streets and highways improvement and other work appertaining thereto:

STREET IMPROVEMENTS.

NEW PAVING.

During the year twenty-one (21) contracts were awarded, of which fifteen (15) were completed and amounted to $259,132.32. There remained two contracts awarded in 1904 to be completed, viz.: New Jersey Railroad Avenue and Peshine Avenue, which amounted to $30,712.70, and were completed during the year 1905. There still remain six (6) street paving contracts to be completed, on which no work has been done, viz.: Third Avenue, Summit street, Lackawanna Avenue, South Eleventh Street, Johnson Street and South Fourteenth Street, the estimated cost of which amounts to $100,398.05. There were two additional streets paved privately by the Murphy Varnish Company, viz.: McWhorter Street from Chestnut Street to Vesey Street, and Chestnut Street from McWhorter Street 100 feet east,

with bitulithic. This work was done with the consent of the Board and executed in accordance with the official form of contract and specifications and plans furnished by this department.

The quantity of paving is as follows:

	PUBLIC, 1905.		PRIVATE, 1905.	
	Miles.	*Square Yards.*	*Miles.*	*Square Yards.*
Granite on concrete	1.400	20,619		
" " sand	1.002	27,290		
Brick on concrete	2.713	57,184		
Bitulithic			0.071	1,140
Sheet asphalt	0.203	3,560		
Total, public	6.038	108,662		
" private	0.071	1,140		
Total	6.109	109,802		

See Table No. 1 for itemized statement.

The amount paid to inspectors on street pavings was $5,005.50, making an additional cost of $0.055 per square yard, or 2 per cent. of the contract cost.

The average price paid per lineal foot for furnishing and setting new bluestone curb and resetting old curb was as follows:

New 20" x 4" curb, quarry cut, set in concrete	$0.64½
" 20" x 4" " quarry cut, set in sand	0.47
" 20" x 4" " four-cut or coarse-axed, set in sand	0.62
" 16" x 4" " quarry cut, set in concrete	0.60
" 16" x 4" " quarry cut, set in sand	0.43½
Old curb, redressed, set in concrete	0.21

Furnishing and setting new granite curb:

New 16" x 5" curb, fine pointed, set in concrete	$1.05
" 20" x 5" " fine pointed, set in sand	0.98

Amount of the different kinds of street pavements on January 1st, 1906:

Sheet asphalt	51.298	miles.
Granite block	51.897	"
Telford	23.741	"
Trap rock or Belgian block	11.609	"
Brick	14.270	"
Cobblestone	8.926	"
Bitulithic	2.016	"
Wood block	0.075	"
Total	163.832	miles,

including 4.516 miles of Telford pavement and 0.08 miles of cobblestone which are laid in the Vailsburgh annexation.

There are about 97.723 miles of unpaved streets within the city limits, including Vailsburgh.

GRADING, CURBING AND FLAGING.

There were two contracts awarded during the year—Chadwick Avenue and Elizabeth Avenue, at an estimated cost of $17,720.75—which have not been completed. There were four contracts awarded in 1904 on which there was practically no work done: Hunterdon Street, Bergen Street, South Nineteenth Street and Ridge Street.

See Table No. 2 for itemized statement.

With the annexation of the Borough of Vailsburgh on January 1st, 1905, there were twenty-nine contracts for grading, curbing and flagging on which there had been no work done, as the contracts were only awarded in December, 1904:

Eleven (11) contracts for grading;

Eight (8) contracts for curbing; and

Ten (10) contracts for bluestone flag and cement sidewalks, which have been under the supervision of Eugene McMurray, C. E., formerly Engineer of the Borough of Vailsburgh.

MISCELLANEOUS.

The whole of the asphalt wearing surface in Milford Avenue from Clinton Avenue to Alpine Street was taken up and new asphalt covering laid by the Standard Bitulithic Company on a binder course, owing to the wearing surface being cracked and having depressions the whole length of the street. The price paid was $1.19 per square yard under a ten (10) year guarantee, but allowing the contractor an additional sum of 12½c. per square yard for maintenance during the second period of five (5) years or 2½c. per square yard for each year. This work amounts to 5,952 square yards, at a cost of $7,086.38.

There were also a number of small repairs made on the different asphalt streets by the same company, amounting to 1,647 square yards at 98c. per square yard, at a cost of $1,619.06, under a six (6) months' guarantee.

PAVING BRICK TESTS DURING 1905.

The following tests of paving bricks and blocks were made during the year by this department. These tests may be divided into two classes:

1. Tests of sample bricks or blocks received at the City Engineer's office which had not previously been tested by this department.

2. Tests of paving bricks or blocks taken from streets while work of paving was actually under way.

Tests of sample bricks or blocks were made as follows:

16 Absorption tests, comprising 52 bricks or blocks;

11 Abrasion tests, comprising 70 bricks or blocks.

37 bricks or blocks were tested at Stevens Institute of Technology, Hoboken, N. J., for transverse strain or breaking test.

Tests of bricks or blocks taken from the following streets while being paved were made during 1905: Peshine Avenue, Hunterdon Street, Alpine Street, Second Avenue, Fifth Street, Elizabeth Avenue and Broome Street:

19 Absorption tests, comprising 137 bricks or blocks;
28 Abrasion tests, comprising 176 bricks or blocks;
31 bricks or blocks were tested at Stevens Institute for transverse strain.

In addition to the above tests an abrasion test of Clearfield fire clay bricks, taken from the completed pavement on Mount Pleasant Avenue, was made for use of the Legal Department of the city in the suit against the city instituted by the Barber Asphalt Paving Company in the United States District Circuit Court at Trenton.

TRACK ELEVATION AND DEPRESSION.

LACKAWANNA RAILROAD.

During 1905 the Lackawanna Railroad completed the erection of the entire number of street highway bridges over their depressed tracks through Roseville, and the city repaved the approaches to the same, except in the case of Sixth Avenue and North Eleventh Street, where the contract of the Barber Asphalt Paving Company was declared invalid by the Court.

The cost of these various repavings, with the amount of work done, is given below:

Street.	Contractor.	Kind of Pavement.	Square Yards.	Square Yards Concr'te 6 inch.	Cost.
Third St	Barber Asphalt Paving Co.	Asphalt.	290.	154.2	$714.10
Fourth St	"	"	176.5	126.8	499.28
Fifth St	"	"	460.3	299.2	1,153.16
N. Sixth St	"	"	304.	180.9	772.58
N. Seventh St	"	"	214.7	186.2	629.30
Roseville Ave	Wm. Van Keuren & Son	Fire-Clay Block.	269.	225.	577.50
Roseville Ave	Inspector's salary				35.00
Bathgate Pl	Barber Asphalt Paving Co.	Asphalt.	132.8	133.5	394.71
Gray St	"	"	141.	39.6	381.90
N. Eleventh St	"	"	67.	27.	253.20
N. Thirteenth St	"	"	40.	18.	117.80
Seventh Ave	"	"	458.	332.4	1,418.06
N. Ninth St	"	"	1,015.	1,015.	2,276.49
N. Ninth St	Inspector's salary				45.50
Park Ave	Thomas A. O'Connor	Telford.	1,806.		
		Brick Gutters.	475.	475.	4,105.70
Park Ave	Inspector's salary				112.00
Sixth Ave. and	Labor and material				814.41
N. Eleventh St	Building Basins				384.53
				Total	$14,685.22

The siding formerly laid at grade, crossing Seventh Avenue, between North Twelfth Street and North Thirteenth Street, was removed during 1905, and the asphalt pavement repaired at the expense of the Lackawanna Railroad.

The second payment of $150,000 on Section 3 was made by the city during October, 1905. This payment was made after the presentation of a careful and exhaustive report on the work by former City Engineer, Ernest Adam.

The work of depressing tracks between a point 350 feet west of High Street and Third Street, Roseville, which was started during May, 1904, was completed (so far as the abolition of grade crossings) on December 17th, 1905, when all trains ran on the depressed tracks between the points named. There is much work remaining to be done on this section, such as the removal of the two trestles; completing the north retaining wall between the canal and First Street; putting steel highway bridges in place at Second Street, First Street, Eighth Avenue, Nesbitt Street and Clifton Avenue; completing the new coal pockets; erecting inclined

plane over Orange Street and Lackawanna Railroad at the Morris Canal, and the excavation of material for railroad yard between Sheffield and Nesbitt Streets.

MISCELLANEOUS SURVEYS.

In addition to the field work for street paving and general engineering and all draughting required by this department, the following surveys were furnished to other City Departments:

School house surveys and elevations.....	10
Engine house surveys and elevations.....	5
Surveys for encroachments on streets.....	3

also measurements for relaying of all flagging ordered by the Department of Sidewalks, and the locating of trees for the Shade Tree Commission; preliminary survey and elevations of West Newark Branch Railroad; survey of proposed new street from Broad Street to High Street; establishing and checking of track grades for the Public Service Corporation, &c. The relocating and resetting of monument stones and boxing of same where streets are to be paved necessitates elaborate surveys at times.

The staff in this department at the close of the year is as follows: William A. Howell, Charles A. Stilger, Walter W. Kane, David M. Crabb, Monckton D. Mitchell, Clifford L. Landmesser and George C. Brandley. The latter is in service for both Street and Sewer Departments.

Respectfully submitted,

LOUIS C. DITTLER,
Engineer, Streets and Highways.

STREETS PAVED IN 1905.

TABLE NO. 1.

Number	Streets	Location	Material.	Length.	Sq. Yards.	Cost per Sq. Yard.	Final Estimate.	Contractor.	Character of Foundation Laid.	Date of Final Estimate.	Expiration of Guarantee.
1	[illegible]	[illegible] to W. N. Branch P. RR.	Brick.	1,329	5,675	$2.15	$14,313.42	Newark Paving Co.	Concrete.	Oct. 30, 1905	Oct. 30, 1910
2	[illegible]	[illegible] to W. Kinney st.	Brick.	1,278	4,934	2.15	13,752.29	Jersey Paving Corp.	Concrete.		
3	E. K[illegible]	[illegible] to Pacific st.	Oblong gran. blk.	727	6,793	1.98	15,006.05	Wm. C. Shanley.	Sand.	Oct. 30, 1905	Oct. 30, 1910
		[illegible] to Adams st.		796				Wm. C. Shanley.	Sand.	Oct. 30, 1905	
4	Elizabeth st.	[illegible] to W. N. Branch P. RR.	Brick.	1,535	8,355	1.91	17,269.91	Harrison Cont. Co.	Concrete.	Dec. 23, 1905	Dec. 23, 1910
5	[illegible]	[illegible] to Waverly ave.	Brick.	1,201	3,895	2.20	9,752.52	J. R. Shanley.	Concrete.	Dec. 23, 1905	Dec. 23, 1910
6	[illegible]	[illegible] st. to st. E. of Blanchard st.	Granite.	3,200	8,079	2.78	30,038.84	Wm. C. Shanley.	Concrete.	Dec. 23, 1905	Dec. 23, 1910
7	[illegible]	[illegible] to Orange st.	Brick.	1,833	5,678	2.10	13,488.06	Wm. Van Keuren.	Concrete.	Dec. 23, 1905	Dec. 23, 1910
8	Hamilton st.	[illegible] to Waverly ave.	Brick.	3,218	12,588	2.15	30,818.13	Newark Paving Co.	Concrete.	Sept. 25, 1905	Sept. 25, 1910
9	M[illegible]	[illegible] to Emmet st.	Ob. gr. blk.	1,704	7,087	1.97	16,083.47	Wm. C. Shanley.	Sand.	Aug. 28, 1905	Aug. 28, 1910
10	N. J. RR.	Westerly side of the P. RR. fr. the line of Hamilton st., 40 N. of Pennington st.	Oblong gran. blk.	3,473	10,375	2.77	36,597.49	Wm. C. Shanley.	Concrete.	Sept. 25, 1905	Sept. 25, 1910
11	N. J. RR.	Easterly side of the P. RR. fr. Market st. to Tichenor st. Westerly side of the P. RR. fr. Pennington st. to Murray st.	Oblong gran. blk.	1,035	2,165	2.79	9,004.70	J. R. Shanley.	Concrete.	Sept. 25, 1905	Sept. 25, 1910
12	[illegible]	N. J. RR. [illegible] to Austin st.	Ob. gr. blk.	418	1,429	1.97	3,121.02	Wm. C. Shanley.	Sand.	Aug. 28, 1905	Aug. 28, 1910
13	[illegible]	[illegible] to Waverly ave.	Brick.	2,480	9,741	2.15	21,708.00	Newark Paving Co.	Concrete.	June 26, 1905	June 26, 1910
14	[illegible]	Mt. Prospect ave. to Lake st.	Brick.	1,151	6,318	2.18	15,314.50	Newark Paving Co.	Concrete.	Nov. 27, 1905	Nov. 27, 1910
15	[illegible]	Springfield ave. to city line	Ob. gr. blk.	1,775	10,752	2.11	33,637.43	Wm. C. Shanley.	Sand.	Nov. 27, 1905	Nov. 27, 1910
16	[illegible]	[illegible] pl. to Morris Canal	Ob. gr. blk.	356	1,229	2.13	2,876.78	J. R. Shanley.	Sand.	Oct. 30, 1905	Oct. 30, 1910
17	Van Ness pl.	[illegible] ave. to Millington ave.	Asphalt.	1,072	3,569	1.71½	7,062.41	Barber Asphalt Co.	Concrete.	Dec. 23, 1905	Dec. 23, 1910
				31,884	108,662		$289,845.02				

	Length.	Sq. Yards.	Miles.	Final Estimate.
Brick	14,328	57,184	2.713	$136,416.83
Granite on sand	8,776	27,290	1.662	70,724.75
" " concrete	7,708	20,619	1.460	75,641.03
Asphalt	1,072	3,569	.203	7,062.41
	31,884	108,662	6.038	$289,845.02

STREETS GRADED, CURBED AND FLAGGED IN 1905.

TABLE NO. 2.

No.	Street Name.	LOCATION. From.	To.	Length in feet.	Embankment. Cu. Yards.	Excavation. Cu. Yards.	Cost per Yard.	Lineal Ft. 20" x 4" Curb.	Cost per Foot.	Sq. Feet of Flagging.	Width.	Cost per Foot.	Sq. Feet Crosswalk.	Cost per Foot.	Sq. Ft. Gutter Paving.	Cost per Foot.	Final Estimate.	CONTRACTOR.
1	Bergen st.	Hawthorne ave.	to Custer ave.	1,700	5,700	----	$0.26	3,226	$0.47	12,460	4	$0.15	863	$0.48	---	----	$5,610.01	James Seme.
2	Hunterdon st. " "	Runyon st. nly. to a point about 370' S. of Clinton ave.		1,150	-----	4,300	0.26	2,008	0.47	6,690	4	0.15	817	0.48	518	$0.65	3,834.72	James Seme.
3	Ridge st.	Bloomfield ave.	to Park ave.	1,350	-----	3,500	0.28	1,965	0.47	8,257	4	0.15½	232	0.60	23	0.65	3,400.16	Robert Doriety.
4	South 19th st. " "	From a point 300' N. of Clinton ave. for a dist. 700' nly.		700	4,500	----	0.24	1,271	0.47	5,207	4	0.15	592	0.48	---	----	2,860.61	James Seme.
5	Chadwick ave. " "	From a point 400' S. of Clinton ave. to Hawthorne ave.		1,600	9,800	----	0.32	3,000	0.45	8,800	4	0.15½	500	0.53	---	----	6,163.00	Alexander Milmoe.
6	Elizabeth ave.	Hawthorne ave.	to city line	----	-----	----	----	2,300	0.62	5,625	5	0.19	----	----	---	----	2,512.25	Philip & Peter Jannarone
				6,500	20,150	7,800		13,760		47,039			3,004		541		$24,380.75	

REPORT OF
ENGINEER OF SEWERS AND DRAINAGE DEPARTMENT.

To the Chief Engineer of the Board of Street and Water Commissioners.

DEAR SIR:—Herewith is submitted the annual report of the Engineering Division of the Department of Sewers and Drainage for the year ended December 31st, 1905:

PUBLIC SEWERS.

During the year 14 contracts for public sewers have been awarded. Of these four remain unfinished at the close of the year. The South Fourteenth Street and Central Avenue sewer, begun in 1904, was completed early in 1905. The relief sewer in the south wall of the D., L. & W. R. R., for which a special contract was made in 1903 with the Railroad Company, has also been entirely finished, but the final estimate not yet paid.

The total length of all public sewers built during the year is 47,348 lineal feet, with 79 basins and 260 manholes, and the total cost $116,455.68.

By the annexation of the Borough of Vailsburgh, on the first day of January, 1905, an additional 54,271 lineal feet of public sewers were added to the former total.

Table No. 1 gives in detail the length, size and cost of all public sewers built during the year.

PRIVATE SEWERS.

By consent of the Board and under the direction of this office 14 sewers were built under private contract, aggre-

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gating in length 5,610 lineal feet, together with 2 basins and 33 manholes; also, 1,538 lineal feet of sewers, 8 manholes and one flush tank in the Vailsburgh district, permission for which was granted by the former Vailsburgh Council. Details as to private sewers will be found in Table No. 2.

Twelve additional basins and 5 manholes were built by order of the Board out of the funds of the Sewer Department, and 7 basins under paving contracts. Four basins were abandoned on account of track elevation.

STATEMENT OF SEWERS AND APPURTENANCES TO JANUARY 1ST, 1906.

Total length of sewers in the city January 1st, 1905, as per report of 1904:

KIND.	LIN. FEET.	MILES.
Brick	364,464	69.02
Pipe (public)	619,502	117.33
Pipe (private)	134,174	25.41
*Total	1,118,140	211.76
Catch Basins	3,056	
Manholes	6,106	
Flush Tanks	39	
Total cost	$4,117,664.18	

BUILT DURING 1905.

KIND.	LIN. FEET.	MILES.
†Brick	7,396	1.40
Pipe (public)	39,952	7.57
Pipe (private)	7,148	1.35
Total	54,496	10.32
Catch Basins	100	
Manholes	306	
Flush Tanks	1	
*Total cost	$116,455.68	

VAILSBURGH ANNEXATION.

KIND.	LIN. FEET.	MILES.
Pipe	54,271	10.28
Manholes	152	
Flush Tanks	53	
Total cost	$69,517.11	

TOTAL TO JANUARY 1ST, 1906.

KIND.	LIN. FEET.	MILES.
†Brick	371,860	70.42
Pipe (public)	713,725	135.18
Pipe (private)	141,322	26.76
Total	1,226,907	232.36
Catch Basins	3,152	
Manholes	6,564	
Flush Tanks	93	
*Total cost	$4,303,636.97	

*Total cost includes public sewer contracts only.

†Of the total length shown under brick sewers, 2,688 lineal feet are constructed of concrete. The first sewer to be built of this material in the city was a length of 167 lineal feet under the Peddie Street Relief Sewer contract in 1903 and 1904. During the past year four separate contracts were awarded for an additional length of 6,250 lineal feet; part of these were for monolithic and part for concrete block construction. One length of 580 feet, where there was not sufficient head-room for an arch, was constructed with a flat top reinforced with currugated steel bars.

Of the work particularly deserving of attention may be mentioned the Clinton annexation sewers, aggregating nearly 6½ miles of concrete and pipe sewers, and draining an area of 320 acres. This work was awarded in two divisions, neither of which is finished; the contract price for both divisions being $65,964.40. Also on account of the difficult construction special mention should be made of the Eighteenth and Nineteenth Avenues system. A large part of this system was built through Magnolia Swamp, where in some places solid bottom was found 28 feet below the surface. In order to support the pipes piles were driven at intervals

of twelve feet, supporting a timber platform on which the pipes were laid, bedded in concrete.

The average contract price for pipe sewers and appurtenances remains practically the same as for last year, as shown by the following table:

Highest, Lowest and Average Contract price for pipe sewers and appertenances in 1905, with average for 1904.

	8"	10"	12"	15"	18"	20"	24"	Basins	Manhole0
Highest.....	.78	.90	1.25	1.50	1.72	2.90	2.60	120.00	50.00
Lowest.....	.59	.69	.60	1.25	1.40	2.90	2.40	95.00	29.08
Average.....	.68	.83	.93	1.37	1.58	2.90	2.54	105.00	41.15
Average 1904..	.76	.88	.99	1.15	1.54	1.62	2.38	109.25	-39.4

INTERCEPTING SEWER.

The following is a condensed statement of the quantity of sewage lifted at the pumping station during the year, the amount of coal consumed and ashes removed:

Total quantity pumped.....	4,939,938,616	gallons.
Maximum pumped per day, October 19, 1905...	27,897,096	"
Minimum " " " October 8, 1905...	6,713,080	"
Average " " "	13,534,078	"
Coal consumed	1,658,514	lbs.
Ashes removed	322,510	"
Last year the average pumped per day was.....	13,312,891	gallons.

During the latter part of the year it was found necessary to thoroughly overhaul the machinery at the pumping station, and a contract for the necessary repairs was awarded to the Seymour & Whitlock Company for the sum of $1,710.00. This work is nearly finished, but no money has yet been paid to the contractors.

JOINT OUTLET SEWER.

The figures given in last year's report relating to the Joint Outlet sewer are now materially changed, owing to the annexation of Vailsburgh, the entire sewage of this section discharging into this outlet. Two branches of the sewer, aggregating 14,623 feet in length, traverse the district, one serving the South Orange Avenue section of Newark, and

the other, part of the village of South Orange. The total cost to Newark, including Vailsburgh, was $135,808.43. The capacity owned in the main sewer is 20.3%, or 4,263,000 gallons per day.

RAINFALL OBSERVATIONS.

The usual tables of rainfall, compiled by Professor Sonn, of the High School, will be found attached to this report.

The following table shows the monthly precipitation in inches for the past five years:

	1901.	1902.	1903.	1904.	1905.
January	1.67	2.64	4.26	3.27	3.67
February	0.69	5.35	4.59	2.67	2.13
March	4.70	4.96	4.08	3.56	3.80
April	6.56	3.57	3.14	4.71	2.49
May	5.96	1.54	0.42	2.93	1.25
June	1.07	7.10	11.50	3.00	3.02
July	4.89	3.04	4.27	5.36	6.27
August	11.94	2.09	14.54	7.46	4.74
September	1.63	5.05	4.56	4.19	6.21
October	2.14	6.65	13.26	4.16	2.91
November	1.61	1.12	0.92	1.85	2.03
December	7.58	7.37	3.56	2.87	3.23
Total	50.44	50.48	69.10	46.03	41.75

The heaviest rainfall for the year occurred on July 30th, when 3.03 inches fell in 18 hours, with a maximum fall of .96 inches per hour, and .40 inches in five minutes.

HERBERT PLACE DOCK.

Late in 1904 a contract was awarded to the Sanford & Harris Company for the construction of a dock at the foot of Herbert Place. This work was finished in April, 1905, the total cost being $1,295.00.

In addition to the work above mentioned, preliminary plans have been prepared for several improvements, which will probably be carried out during the coming year.

The corps of assistants remains the same as for last year:

JOHN A. SCHIECK, Principal Assistant;
JAMES B. BURNETT, JR.,
HARRY D. FRANKLIN,
GOLINE DOREMUS.

Respectfully submitted,

EDWARD S. RANKIN,
Engineer, Sewers and Drainage.

MONTHLY REPORT OF PRECIPITATION (RAIN AND MELTED SNOW).

AS OBSERVED AT NEWARK PUBLIC HIGH SCHOOL, BY PROF. G. C. SONN, WITH U. S. GOV. RAIN GAUGE.

JANUARY, 1905. ELEVATION OF GAUGE ABOVE SEA LEVEL, 180 FEET. TABLE NO. 1.

Day of Month.	Beginning.	Ending.	Max. in 5 min. in Inches.	Beginning.	Max. in 10 min. in Inches.	Beginning.	Max. in 1 hour in Inches.	Beginning.	Am't of Rain or Melted Snow in Inches.	Depth of Snow in Inches.	General Direction of Wind.	Max. Velocity of Wind Miles per hour.	Average Temperature. Degrees.	Remarks.
1											S W	10	43	
2	11.00 a m	11.30 a m							0.01		S W	10	41	
3	11.00 a m	10.00 p m							0.25§	2.00	N	40	32	§Snow.
4	2.00 a m	8.30 a m							0.20§	2.00	N W	60	11	§Snow.
5											S W	12	21	
6	4.20 a m	12.00 p m							1.14‡	0.40	N E	40	30	‡Rain and snow.
7	12.00 a m	4.00 a m							0.37		W	50	38	
8											W	20	27	
9											S	15	27	4th day skating Br'h Bk.‡‡
10	5.00 a m	5.30 a m							*	*	W	15	29	5th " " " "
11	4.00 p m	6.00 p m							0.05‡	0.20	N W	7	27	6th " " " "
12	7.00 a m	2.00 p m							0.71		S W	15	35	
13											N W	30	25	7th " " " "
14											N W	24	18	8th " " " "
15											S W	30	17	9th " " " "
16											W	12	24	10th " " " "
17											S W	12	29	11th " " " "
18											S W	15	32	12th " " " "
19											S W	15	38	13th " " " "
20											N W	30	35	
21	5.00 p m	9.00 p m							0.02§	0.30	N W	10	31	14th " " " "
22	5.00 a m	10.00 a m							0.02‡	0.25	N W	20	30	
23											N W	12	20	15th " " " "
24	8.00 a m	12.00 p m							0.20§	2.00	N E	15	18	16th " " " "
25	12.00 a m	8.50 p m							0.70§	8.00	N W	60	12	Great storm.
26											N W	60	7	
27											S W	24	20	
28	10.40 a m	11.30 a m							*	*	W	24	20	
29											S W	12	16	
30	5.00 a m	11.00 a m							*	*	N W	15	15	
31											N W	10	17	
									3.67	15.15			25	

*Too small to be measured.
‡‡During the winter of 1904-5.

§Snow.
‡Snow and rain.

MONTHLY REPORT OF PRECIPITATION (RAIN AND MELTED SNOW).

AS OBSERVED AT NEWARK PUBLIC HIGH SCHOOL, BY PROF. G. C. SONN, WITH U. S. GOV. RAIN GAUGE.

FEBRUARY, 1905. ELEVATION OF GAUGE ABOVE SEA LEVEL, 180 FEET. TABLE NO. 2.

Day of Month.	Beginning.	Ending.	Max. in 5 min. in Inches.	Beginning.	Max. in 10 min. in Inches.	Beginning.	Max. in 1 hour in Inches.	Beginning.	Am't of Rain or Melted Snow in Inches.	Depth of Snow in Inches.	General Direction of Wind.	Max. Velocity of Wind Miles per hour.	Average Temperature. Degrees.	Remarks.
1	4.30 p m	10.00 p m							*	*	S W	15	22	*Too small to be measured.
2											W	20	12	
3											N W	20	10	
4											N W	15	9	
5	9.25 p m	12.00 p m							0.20§	1.75	N W	12	17	§Snow.
6	12.00 a m	10.00 a m							0.51‡	*	N W	15	30	‡Snow and rain.
7											N W	30	15	
8											N W	12	19	
9	1.15 a m	9.00 p m							0.41‡	4.00	N E	12	30	‡Snow and rain.
10											W	15	27	
11											N W	15	19	
12	12.00 m	10.00 p m							0.85‡	1.50	N E	15	28	‡Snow and rain.
13	10.00 a m	5.00 p m							0.03§	0.50	N W	50	19	§Snow.
14											S W	12	8	
15	10.00 a m	5.00 p m							*	*	N W	30	15	
16											S W	30	12	
17											S W	24	25	
18											W	15	19	
19											S W	15	24	
20	8.45 a m	6. p m							0.13‡	2.00	S W	12	32	‡Snow and rain.
21											N	15	36	
22											N E	30	28	
23											N W	15	29	
24											N W	12	30	
25											S W	9	31	
26											N W	24	31	
27											S W	15	24	
28	8.45 a m	10.00 a m							*	*	W	20	28	
									2.13	9.75			22	

MONTHLY REPORT OF PRECIPITATION (RAIN AND MELTED SNOW).

AS OBSERVED AT NEWARK PUBLIC HIGH SCHOOL, BY PROF. G. C. SONN, WITH U. S GOV. RAIN GAUGE.

MARCH, 1905. ELEVATION OF GAUGE ABOVE SEA LEVEL, 180 FEET. TABLE NO. 3.

Day of Month.	Beginning.	Ending.	Max. in 5 min. in Inches.	Beginning.	Max. in 10 min. in Inches.	Beginning.	Max. in 1 hour in Inches.	Beginning.	Am't of Rain or Melted Snow in Inches.	Depth of Snow in Inches.	General Direction of Wind.	Max. Velocity of Wind Miles per hour.	Average Temperature. Degrees.	Remarks.
1											N W	20	26	
2											W	20	23	
3											S W	15	30	
4	2.00 a m	11.00 a m							0.23‡	4.00	N	30	27	‡Snow and rain.
5											S W	12	27	
6											N W	20	29	
7	1.20 p m	10.00 p m							0.12‡	1.00	S E	12	31	‡Snow and rain.
8	2.40 p m	12.00 p m							0.30		S W	12	33	
9	12.00 a m	11.30 p m							0.36		E	10	34	
10											N W	20	39	
11											W	10	31	
12											W	24	32	
13											S W	10	30	
14											N	15	30	
15											S	10	31	
16											S W	10	38	
17											E	10	38	
18											S W	12	54	
19	8.20 a m	3.30 p m	.05	9.45 a m	.10	9.45 a m	.20	9.45 a m	0.43		W	20	50	
20	2.00 a m	12.00 p m							0.08		N E	20	36	
21	12.00 a m	10.00 p m	.05	1.35 p m	.08	1.35 p m	.25	1.35 p m	1.40		N E	30	33	
22											S E	10	37	
23											S E	12	36	
24	6.00 p m	12.00 p m							0.20		S E	12	41	
25	12.00 a m	11.00 a m	.03	12.30 a m	.08	12.30 a m	.24	12.30 a m	0.41		N W	24	46	
26	6.15 p m	12.00 p m							0.11		S E	15	47	
27	12.00 a m	3.00 a m							0.13		S W	20	58	
28											S W	15	65	
29											S E	10	58	
30	3.35 p m	4.00 p m							0.03†		E	10	53	†Thunderstorm.
31											W	15	62	
—									3.80	4.00			39	

MONTHLY REPORT OF PRECIPITATION (RAIN AND MELTED SNOW).

AS OBSERVED AT NEWARK PUBLIC HIGH SCHOOL, BY PROF. G. C. SONN, WITH U. S GOV. RAIN GAUGE.

APRIL, 1905. ELEVATION OF GAUGE ABOVE SEA LEVEL, 180 FEET. TABLE NO. 4.

Day of Month.	Beginning.	Ending.	Max. in 5 min. in Inches.	Beginning.	Max. in 10 min. in Inches.	Beginning.	Max. in 1 hour in Inches.	Beginning.	Am't of Rain or Melted Snow in Inches.	Depth of Snow in Inches.	General Direction of Wind.	Max. Velocity of Wind Miles per hour.	Average Temperature. Degrees.	Remarks.
1											N W	30	50	
2											N W	30	40	
3											S W	12	49	
4	4.55 p m	12.00 p m	.04	8.30 p m	.08	8.35 p m	.38	8.00 p m	0.55†		S E	10	50	†Thunderstorm.
5	12.00 a m	12.00 p m	.05	12.35 a m	.07	12.35 a m	.16	12.35 a m	0.79		N E	15	46	
6	12.00 a m	8.45 a m							0.13		N W	20	43	
7											W	10	44	
8											N W	15	40	
9											S W	30	49	
10	5.30 p m	5.48 p m							0.05†		S W	20	63	†Thunderstorms.
11	2.00 a m	3.15 p m							0.09		S W	12	56	
12	2.00 a m	3.30 a m							0.03		N E	10	50	
13											N E	18	48	
14	7.40 p m	8.30 p m							0.18†		S	18	55	†Thunderstorm.
15											W	30	45	
16										•	N W	30	38	*Too small to be measured.
17										•	W	24	44	*Too small to be measured.
18	2.00 a m	2.30 p m							0.02‡	•	N W	40	37	*Too small to be measured.
19											S W	30	46	‡Snow and rain.
20	3.00 p m	10.00 p m							0.08		S W	30	57	
21	3.25 p m	6.20 p m							0.42†		S W	30	60	†Thunderstorm.
22											N W	15	48	
23											N W	30	47	
24											S W	24	53	
25											W	12	58	
26	9.35 p m	10.30 p m							0.01		S W	20	62	
27	6.10 a m	11.30 p m							0.11		E	12	62	
28	5.30 p m	6.30 p m							*		S E	12	51	*Too small to be measured.
29	1.00 p m	3.00 p m							0.02		S E	10	42	
30	4.00 a m	5.00 a m							0.01		S W	15	60	
									2.49				50	

MONTHLY REPORT OF PRECIPITATION (RAIN AND MELTED SNOW).

AS OBSERVED AT NEWARK PUBLIC HIGH SCHOOL, BY PROF. G. C. SONN, WITH U. S GOV. RAIN GAUGE.

MAY, 1905. ELEVATION OF GAUGE ABOVE SEA LEVEL, 180 FEET. TABLE NO. 5.

Day of Month.	Beginning.	Ending.	Max. in 5 min. in Inches.	Beginning.	Max. in 10 min. in Inches.	Beginning.	Max. in 1 hour in Inches.	Beginning.	Am't of Rain or Melted Snow in Inches.	Depth of Snow in Inches.	General Direction of Wind.	Max. Velocity of Wind Miles per hour.	Average Temperature. Degrees.	Remarks.
1											W	40	44	
2											S E	20	47	
3											S W	35	66	
4											N E	60	57	
5											S E	15	51	
6	12.20 a m	12.30 a m							*		S E	10	58	*Too small to be measured.
7	5.00 a m								*		S W	50	70	*Too small to be measured.
8											S E	24	56	
9	3.00 a m	3.30 a m							*†		W	24	58	*Too small to be measured.
10											W	10	60	†Thunderstorm.
11											S E	12	63	
12	12.20 a m	12.00 p m							0.26		E	10	61	
13	12.00 a m	2.00 a m							0.16		S E	7	56	
14	8.20 a m	10.30 a m							0.26†		S E	8	61	†Thunderstorm.
15	1.30 a m	2.00 a m							0.01		S W	12	68	
16	12.00 a m	9.40 p m							0.19		E	12	59	
17	8.30 p m	10.00 p m							0.01		S E	12	50	
18	12.00 a m	2.00 a m							0.21		W	40	59	
19											W	20	60	
20											N W	35	52	
21											N W	12	56	
22											S E	12	61	
23	2.00 a m								0.01		W	20	55	
24											S W	15	57	
25											S	15	64	
26											S	20	71	
27											E	12	69	
28	9.00 p m	9.05 p m							*		N W	20	70	*Too small to be measured.
29	3.00 a m	11.00 p m							*		S E	15	68	*Too small to be measured.
30											S E	12	62	
31	9.45 p m	12.00 p m							0.14		N E	12	59	
									1.25				61	

MONTHLY REPORT OF PRECIPITATION (RAIN AND MELTED SNOW).

AS OBSERVED AT NEWARK PUBLIC HIGH SCHOOL, BY PROF. G. C. SONN, WITH U. S GOV. RAIN GAUGE.

JUNE, 1905. ELEVATION OF GAUGE ABOVE SEA LEVEL, 180 FEET. TABLE NO. 6.

Day of Month.	Beginning.	Ending.	Max. in 5 min. in Inches.	Beginning.	Max. in 10 min. in Inches.	Beginning.	Max. in 1 hour in Inches.	Beginning.	Amt of Rain or Melted Snow in Inches.	Depth of Snow in Inches.	General Direction of Wind.	Max. Velocity of Wind Miles per hour.	Average Temperature. Degrees.	Remarks.
1	12.00 a m	5.40 a m							0.19		W	12	56	
2	2.45 p m	3.40 p m							0.12†		S W	24	64	†Thunderstorm.
3											N W	30	59	
4											S W	15	66	
5											S W	12	74	
6	1.50 p m	4.55 p m	.06	1.55 p m	.12	1.55 p m	.30	1.55 p m	0.51†		N E	20	63	†Thunderstorm.
7	5.10 a m	11.15 p m							0.35†		N E	20	53	†Thunderstorm.
8											N W	15	57	
9											N W	12	67	
10	5.00 a m	5.20 a m							*		S W	18	69	*Too small to be measured.
11	9.50 a m	5.50 p m							*		S W	12	69	*Too small to be measured.
12	10.00 a m	5.00 p m							0.28		S E	5	66	
13											S W	15	73	
14											N W	12	72	
15											S E	10	73	
16											S E	9	61	
17											S E	10	73	
18											S W	20	83	
19	12.25 a m	1.35 a m							0.06†		N E	20	70	†Thunderstorm.
20	4.00 a m	5.00 a m							0.04		N E	12	60	
21	1.20 p m	1.45 p m							0.01†		S E	5	62	†Thunderstorm.
22	2.30 p m	10.00 p m	.33	2.50 p m	.51	2.50 p m	1.35	2.35 p m	1.38†		S E	30	72	†Thunderstorm.
23	12.00 a m	12.30 p m							0.02		N W	12	70	
24	2.10 a m	9.00 a m							0.06		N W	7	67	
25											W	10	74	
26	1.25 p m	1.45 p m							*		W	40	71	*Too small to be measured.
27	12.05 p m	5.30 p m							*		N W	30	61	*Too small to be measured.
28											N W	20	66	
29											N W	10	68	
30											S	18	73	
									3.02				67	

MONTHLY REPORT OF PRECIPITATION (RAIN AND MELTED SNOW).

AS OBSERVED AT NEWARK PUBLIC HIGH SCHOOL, BY PROF. G. C. SONN, WITH U. S GOV. RAIN GAUGE.

JULY, 1905. ELEVATION OF GAUGE ABOVE SEA LEVEL, 180 FEET. TABLE NO. 7.

Day of Month.	Beginning.	Ending.	Max. in 5 min. in Inches.	Beginning.	Max. in 10 min. in Inches.	Beginning.	Max. in 1 hour in Inches.	Beginning.	Am't of Rain or Melted Snow in Inches.	Depth of Snow in Inches.	General Direction of Wind.	Max. Velocity of Wind Miles per hour.	Average Temperature. Degrees.	Remarks.
1	7.05 a m	9.00 a m							0.05		S	15	70	
2	2.30 a m	10.25 p m	.07	10.42 a m	.10	10.42 a m	.26	10.42 a m	0.47†		S	12	68	†Thunderstorm.
3											W	12	75	
4											S W	15	75	
5											S E	12	70	
6											S E	15	70	
7											S E	10	71	
8	3.43 a m	3.57 p m	.21	2.40 p m	.42	2.40 p m	.61	2.25 p m	0.86		S E	20	77	
9											S	20	81	
10	2.20 p m	6.30 p m							*†		S	15	80	*Too small to be measured.
11	12.40 p m	7.05 p m	.30	1.50 p m	.38	1.50 p m	.55	1.25 p m	0.56†		S W	20	76	†Thunderstorm.
12											S	30	80	
13	8.55 a m	3.10 p m							0.19†		S W	20	76	†Thunderstorm.
14	3.55 p m	11.45 p m							0.03		S W	30	79	
15											N W	30	74	
16											S E	15	72	
17											W	20	85	
18											W	20	87	
19	2.30 p m	2.35 p m							*		W	50	83	*Too small to be measured.
20	2.30 p m								*		W	15	78	*Too small to be measured.
21											S W	12	74	
22											E	15	70	
23	4.00 a m	7.00 a m	.07	4.35 a m	.08	4.35 a m	.27	4.00 a m	0.50		E	12	66	
24	8.25 a m	2.00 p m							0.10		E	15	71	
25											W	20	67	
26											N W	12	68	
27											W	15	69	
28											S E	20	72	
29	4.17 a m	9.20 p m							0.10†		N E	15	72	†Thunderstorm.
30	1.50 a m	7.53 p m	.40	2.55 a m	.70	2.55 a m	.96	2.30 a m	3.03†		W	15	70	†Thundersform.
31	10.58 a m	5.25 p m	.13	4.35 p m	.20	4.35 p m	.32	4.25 p m	0.38†		W	12	68	†Thunderstorm.
									6.27				74	

MONTHLY REPORT OF PRECIPITATION (RAIN AND MELTED SNOW).

AS OBSERVED AT NEWARK PUBLIC HIGH SCHOOL, BY PROF. G. C. SONN, WITH U. S GOV. RAIN GAUGE.

AUGUST, 1865. ELEVATION OF GAUGE ABOVE SEA LEVEL, 180 FEET. TABLE NO. 8.

Day of Month.	Beginning.	Ending.	Max. in 5 min. in Inches.	Beginning.	Max. in 10 min. in Inches.	Beginning.	Max. in 1 hour in Inches.	Beginning.	Am't of Rain or Melted Snow in Inches.	Depth of Snow in Inches.	General Direction of Wind.	Max. Velocity of Wind Miles per hour.	Average Temperature. Degrees.	Remarks.
1											N W	30	66	
2											W	12	69	
3											W	10	70	
4											S E	12	73	
5											S	20	73	
6											W	15	73	
7											N W	12	77	
8	4.30 a m	3.08 p m	.20	11.50 a m	.33	11.50 a m	.33	11.50 a m	0.62†		S W	10	76	†Thunderstorm.
9	11.17 a m	3.40 p m							0.10		S E	10	73	
10	12.00 a m	8.10 p m							0.35†		S W	12	76	†Thunderstorm.
11											S W	20	80	
12	5.45 p m	7.02 p m							0.10†		S W	20	77	†Thunderstorm.
13	6.00 p m	6.30 p m							0.10†		W	20	74	†Thunderstorm.
14											E	15	68	
15	4.50 a m	12.00 p m	.16	8.30 a m	.27	8.30 a m	.70	8.30 a m	1.56†		N E	12	66	†Thunderstorm.
16	12.00 a m	1.30 p m							0.12†		N E	15	59	†Thunderstorm.
17											N	12	63	
18											S E	20	63	
19											S E	15	61	
20											S E	12	65	
21											S W	15	73	
22											S W	20	76	
23											S W	15	75	
24	8.00 a m	11.46 p m							0.48		S W	15	79	
25	3.37 a m	4.00 p m	.20	5.00 a m	.35	5.55 a m	.55	5.55 a m	0.98		N E	15	64	
26											N W	12	65	
27											N W	15	63	
28											S W	12	65	
29	2.30 a m	3.24 a m	.14	2.30 a m	.16	2.30 a m	.20	2.30 a m	0.20†		N W	15	71	†Thunderstorm.
30	10.18 a m	6.30 p m	.15	12.40 p m	.17	12.45 p m	.19	12.15 p m	0.13		W	12	69	
31											N W	15	70	
									4.74				70	

AS OBSERVED AT NEWARK PUBLIC HIGH SCHOOL, BY PROF. G. C. SONN, WITH U. S GOV. RAIN GAUGE.

JULY, 1905. ELEVATION OF GAUGE ABOVE SEA LEVEL, 180 FEET. TABLE NO. 7.

Day of Month.	Beginning.	Ending.	Max. in 5 min. in Inches.	Beginning.	Max. in 10 min. in Inches.	Beginning.	Max. in 1 hour in Inches.	Beginning.	Am't of Rain or Melted Snow in Inches.	Depth of Snow in Inches.	General Direction of Wind.	Max. Velocity of Wind Miles per hour.	Average Temperature. Degrees.	Remarks.
1	7.05 a m	9.00 a m							0.05		S	15	70	
2	2.30 a m	10.25 p m	.07	10.42 a m	.10	10.42 a m	.26	10.42 a m	0.47†		S	12	68	†Thunderstorm.
3											W	12	75	
4											S W	15	75	
5											S E	12	70	
6											S E	15	70	
7											S E	10	71	
8	3.43 a m	3.57 p m	.21	2.40 p m	.42	2.40 p m	.61	2.25 p m	0.86		S E	20	77	
9											S	20	81	
10	2.20 p m	6.30 p m							*†		S	15	80	*Too small to be measured.
11	12.40 p m	7.05 p m	.30	1.50 p m	.38	1.50 p m	.55	1.25 p m	0.56†		S W	20	76	†Thunderstorm.
12											S	30	80	
13	8.55 a m	3.10 p m							0.19†		S W	20	76	†Thunderstorm.
14	3.55 p m	11.45 p m							0.03		S W	30	79	
15											N W	30	74	
16											S E	15	72	
17											W	20	85	
18											W	20	87	
19	2.30 p m	2.35 p m							*		W	50	83	*Too small to be measured.
20	2.30 p m								*		W	15	78	*Too small to be measured.
21											S W	12	74	
22											E	15	70	
23	4.00 a m	7.00 a m	.07	4.35 a m	.08	4.35 a m	.27	4.00 a m	0.50		E	12	66	
24	8.25 a m	2.00 p m							0.10		E	15	71	
25											W	20	67	
26											N W	12	68	
27											W	15	69	
28											S E	20	72	
29	4.17 a m	9.20 p m							0.10†		N E	15	72	†Thunderstorm.
30	1.50 a m	7.53 p m	.40	2.55 a m	.70	2.55 a m	.96	2.30 a m	3.03†		W	15	70	†Thunderstorm.
31	10.58 a m	5.25 p m	.13	4.35 p m	.20	4.35 p m	.32	4.25 p m	0.38†		W	12	68	†Thunderstorm.
									6.27				74	

MONTHLY REPORT OF PRECIPITATION (RAIN AND MELTED SNOW).

AS OBSERVED AT NEWARK PUBLIC HIGH SCHOOL, BY PROF. G. C. SONN, WITH U. S GOV. RAIN GAUGE.

OCTOBER, 1905. ELEVATION OF GAUGE ABOVE SEA LEVEL, 180 FEET. TABLE NO. 10.

Day of Month.	Beginning.	Ending.	Max. in 5 min. in Inches.	Beginning.	Max. in 10 min. in Inches.	Beginning.	Max. in 1 hour in Inches.	Beginning.	Am't of Rain or Melted Snow in Inches.	Depth of Snow in Inches.	General Direction of Wind.	Max. Velocity of Wind Miles per hour.	Average Temperature. Degrees.	Remarks.
1											S E	6	65	
2	10.30 p m	11.30 p m							*		S E	8	65	*Too small to be measured.
3	12.10 a m	4.00 a m							0.14		N W	15	62	
4											S W	15	67	
5											N W	15	68	
6											N W	15	54	
7											S W	7	50	
8											S W	15	54	
9											E	6	67	
10											S E	12	57	
11	10.45 a m	8.45 p m							0.49		E	35	60	
12											W	30	57	
13											W	24	49	
14											S W	10	60	
15											S W	12	63	
16											W	15	63	
17											S	7	53	
18	6.50 a m	10.00 a m							0.01		S E	12	62	
19	1.30 p m	12.00 p m							0.57		S E	8	67	
20	12.00 a m	4.00 p m							1.55		S W	24	56	
21											W	30	45	
22											W	12	44	
23											W	15	46	
24	6.30 a m	11.40 p m							0.01		S W	15	51	
25	4.30 p m	11.30 p m							0.14		N	8	44	
26											N E	24	38	
27											N	7	43	
28											S W	12	48	
29											N W	24	42	
30											N W	12	42	
31											S E	15	45	
									2.91				55	

MONTHLY REPORT OF PRECIPITATION (RAIN AND MELTED SNOW).

AS OBSERVED AT NEWARK PUBLIC HIGH SCHOOL, BY PROF. G. C. SONN, WITH U. S GOV. RAIN GAUGE.

NOVEMBER, 1905. ELEVATION OF GAUGE ABOVE SEA LEVEL, 180 FEET. **TABLE NO. 11.**

Day of Month.	Beginning.	Ending.	Max. in 5 min. in Inches.	Beginning.	Max. in 10 min. in Inches.	Beginning.	Max. in 1 hour in Inches.	Beginning.	Am't of Rain or Melted Snow in Inches.	Depth of Snow in Inches.	General Direction of Wind.	Max. Velocity of Wind Miles per hour.	Average Temperature. Degrees.	Remarks.
1											S W	24	45	
2											N W	8	38	
3	6.05 p m	10.30 p m							0.02		S	15	45	
4											N W	18	44	
5											S	12	46	
6	12.25 a m	12.20 p m							0.09		W	15	52	
7											N W	15	46	
8	7.00 a m	8.10 a m							*		W	12	43	*Too small to be measured.
9	4.50 p m	5.10 p m							*		W	12	39	*Too small to be measured.
10											N W	20	35	
11											S W	12	39	
12											S W	20	48	
13	11.40 p m	11.50 p m							*		S W	40	49	*Too small to be measured.
14											W	8	26	
15	7.45 p m	8.45 p m							0.02		S W	15	38	
16	6.55 a m	12.40 p m							0.03		Variable	15	43	
17											W	30	41	
18											N W	20	43	
19											N W	8	36	
20											N W	15	34	
21											N W	15	36	
22											S W	20	41	
23											S W	15	48	
24	8.45 p m	9.40 p m							*		S W	20	52	*Too small to be measured.
25	1.00 a m	6.00 a m							*		S W	14	51	*Too small to be measured.
26	9.20 p m	9.40 p m							*		N W	10	44	*Too small to be measured.
27											N W	10	40	
28	12.15 p m	12.00 p m	.03	5.00 p m	.04	5.00 p m	.18	4.00 p m	0.60		N E	10	39	
29	1.00 a m	8.40 p m	.03	2.35 a m	.05	2.35 a m	.20	2.35 a m	1.27		S W	24	56	
30											N W	40	23	
									2.03				41	

MONTHLY REPORT OF PRECIPITATION (RAIN AND MELTED SNOW).

AS OBSERVED AT NEWARK PUBLIC HIGH SCHOOL, BY PROF. G. C. SONN, WITH U. S GOV. RAIN GAUGE.

DECEMBER, 1905. ELEVATION OF GAUGE ABOVE SEA LEVEL, 180 FEET. TABLE NO. 12.

Day of Month.	Beginning.	Ending.	Max. in 5 min. in Inches.	Beginning.	Max. in 10 min. in Inches.	Beginning.	Max. in 1 hour in Inches.	Beginning.	Am't of Rain or Melted Snow in inches.	Depth of Snow in Inches.	General Direction of Wind.	Max. Velocity of Wind Miles per hour.	Average Temperature. Degrees.	Remarks.
1											N W	10	26	
2	6.30 p m	12.00 p m							0.15		S E	10	44	
3	12.00 a m	3.00 p m							0.74		N W	15	47	
4											N W	20	32	
5											W	15	31	
6											S W	15	33	
7											W	12	41	
8											S W	12	43	
9	3.00 p m	12.00 p m							0.08‡	0.2	N E	24	36	‡Snow and rain.
10	12.00 a m	6.30 a m							0.10‡	0.2	N W	50	29	‡Snow and rain.
11											S W	20	36	
12											S	12	40	
13											N W	12	41	
14											N W	18	30	
15											N	20	21	
16	5.15 p m	5.45 p m							*	*	N	12	29	*Too small to be measured.
17											N	12	33	
18											S W	20	36	
19											N W	7	38	
20	10.10 p m	12.00 p m							0.20		N E	12	40	
21	12.00 a m	10.00 a m							1.32		W	30	45	
22											S W	30	45	
23	5.00 a m	10.30 a m							0.08		N W	15	39	
24											S W	15	30	
25											S W	9	30	
26											S W	15	33	
27											S W	10	33	
28											W	9	36	
29	12.30 a m	7.40 p m							0.56		S W	30	48	
30											W	30	36	
31											S W	10	34	
									3.23				36	

TURE OF SOIL.	CONTRACTOR.	REMARKS.
S. Fo Cer bra		Underdrain. Built on concrete cradle.
S. Fou Central		Built on bottom boards. Old sewer in S. 14th St. and Central Ave., from M. & E. RR. to S. 13th St. removed.
S. Fift Ninth Gould · pan	The Harrison Con. Co.	Commenced in 1904.

Built For.	Statement No.	Remarks.	Date.
David M. Tunstead et al.	264		May, 1905
Charles Mers			March, 1905
Cooper & Wiegand Co.			June, 1905
Henry Orben			July, 1905
Sommers & Strauss			Sept., 1905
City of Newark			" 1905
Orange Brewing Co.	265		" 1905
Arthur W. Moore		One lamp hole	April, 1905
Philip Lowy			" 1905
M. White			Nov., 1905
Noah Brooks			" 1905
Riker & Riker		J. H. Francisco, Engr.	Dec., 1905
F. H. Tiplin		Harrison Van Duyne & Sons, Engrs.	May, 1905
Forest Hill Land Co.		Harrison Van Duyne & Sons, Engrs.	July, 1905
Alex. Maybaum & Son		Eugene A. McMurray, Engr. One flush tank, 1 lamp hole	1905

soil and rock	Albert F. Luts	Not completed.
Hillside soil	Pasquale Cestone	Not completed.
Clint Sect. 8,		Concrete. Concrete.
	Wm. J. McCloud & Co.	Not completed.
Clinto Sect. 3, 2		Concrete blocks. Not completed. 6′ to 8′ deep. 8′ to 10′ deep. Over 10′ deep. Less than 8′ deep. 8′ to 10′ deep. Less than 6′ deep. 6′ to 8′ deep. 8′ to 10′ deep.
	James A. Christie	Over 10′ deep. Not completed.

MONT

AS OBSERVED AT NE

DECEMBER, 1905.

Day of Month.	Beginning.	Ending.	Max. in 5 min. in Inches.
1			
2	6.30 p m	12.00 p m	
3	12.00 a m	3.00 p m	
4			
5			
6			
7			
8			
9	3.00 p m	12.00 p m	
10	12.00 a m	6.30 a m	
11			
12			
13			
14			
15			
16	5.15 p m	5.45 p m	
17			
18			
19			
20	10.10 p m	12.00 p m	
21	12.00 a m	10.00 a m	
22			
23	5.00 a m	10.30 a m	
24			
25			
26			
27			
28			
29	12.30 a m	7.40 p m	
30			
31			

LE NO. 12.

ES.

1.
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measured.

RE OF SOIL.	CONTRACTOR.	REMARKS.
		Underdrain.
		Built on concrete cradle.
		Built on bottom boards.
		Old sewer in S. 14th St. and Central Ave., from M. & E. RR. to S. 13th St. removed.
in	The Harrison Con. Co.	Commenced in 1904.
in and boulders	Albert F. Luts	
	John F. Murray	
	John F. Murray	
round, bog and	The Harrison Con. Co.	1,730 ft. of sewer built on piles; 177 piles at $10.00.
rd pan		
boulders	James A. Christie	
round and sand	Albert F. Luts	
round	Albert F. Luts	
round		
d red soil	Albert F. Luts	
	The Harrison Con. Co.	Concrete blocks.
		Concrete blocks.
round and red	J. Roosevelt Shanley	Concrete.
		Heavy rock excavation.
l and rock	Albert F. Luts	Not completed.
	Pasquale Cestone	Not completed.
		Concrete.
		Concrete.
	Wm. J. McCloud & Co.	Not completed.
		Concrete blocks.
		Not completed.
		6′ to 8′ deep.
		8′ to 10′ deep.
		Over 10′ deep.
		Less than 8′ deep.
		8′ to 10′ deep.
		Less than 6′ deep.
		6′ to 8′ deep.
		8′ to 10′ deep.
	James A. Christie	Over 10′ deep. Not completed.

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ASTOR, LENOX AND
TILDEN FOUNDATIONS

IN MEMORIAM.

On December 4th, 1905, Commissioner GEORGE M. BALLARD, member of the Board of Street and Water Commissioners, died after a brief illness.

The Board at a special meeting adopted the following memorial:

"We, the members of this Board, meet today to mourn his loss. He was a native of this State, and for most of his life a resident of this city. With his straightforward earnestness he won the respect of his business associates and the confidence of his fellow-citizens. By his fairness of disposition and kindness of heart he earned the love and esteem of his friends and intimates.

"Always active in municipal affairs, he was chosen by his neighbors to be their representative in the Common Council of this city. True to his trust, faithful to his obligations, he was later elected to membership in this Board. The same sterling qualities that won him deserved consideration in the Council chamber here caused his selection as our President. Upright, conscientious and hard-working, he was at all times a worthy opponent, an invaluable co-worker. In his death the Board suffers an irreparable loss.

In our regard for this respected association and esteemed friend, we, the members of the Board of Street and Water Commissioners of the City of Newark, do hereby resolve that this memorial be spread upon the minutes of the Board and that a suitably engrossed copy thereof be sent to the family of the deceased.

"*Be it resolved,* That the members of this Board will in a body attend the funeral.

"Out of respect to his memory it is directed that the main office of this Board be draped in mourning for thirty days, and that the departments under its control be closed from 12 o'clock noon on the day of the funeral."

ANNUAL REPORT

OF THE

Board of Street and Water Commissioners

OF THE

CITY OF NEWARK, N. J.

FOR THE YEAR

1906

ANNUAL REPORT

OF THE

Board of Street and Water Commissioners

OF THE

CITY OF NEWARK, NEW JERSEY

For the Year Ended December 31, 1906

OFFICERS AND MEMBERS

PRESIDENT.....AUGUSTUS F. EGGERS, 21 South 10th St.

CITY COUNSEL.....JOSEPH COULT, 58 Mt. Pleasant Ave.

CLERK OF THE BOARD.....WM. E. GREATHEAD, 1092 Broad St.

CHIEF ENGINEER.....MORRIS R. SHERRERD, 938 Broad St.

SECRETARY TO CHIEF ENGINEER. } JOSEPH G. WOLBER, 18 Vermont Ave.

GENERAL SUP'T OF WORKS..CHAS. M. SHIPMAN, 106 Lincoln Ave.

ENGINEER AND SUP'T. DEPT. OF WATER } GEO. SANZENBACHER, 276 South 6th St.

ENGINEER DEPT. OF STREETS AND HIGHWAYS. } LOUIS C. DITTLER, 130 Seymour Ave.

ENGINEER DEPT. OF SEWERS AND DRAINAGE. } EDWARD S. RANKIN, 751 High St.

CASHIER DEPT. OF WATER....H. D. NORTHROP, 28 Waverly Ave.

COMMISSIONERS.	RESIDENCE.
AUGUSTUS F. EGGERS	21 South 10th St.
ARTHUR R. DENMAN	40 Park Pl.
FRANK J. BOCK	10 Renner Ave.
JOSEPH S. VINSON	277 Walnut St.
GEORGE H. PHILLIPS	141 Lincoln Ave.

To the Honorable the Mayor and Common Council of the City of Newark, N. J.

Pursuant to law, the Board of Street and Water Commissioners of the City of Newark, N. J., hereby presents its annual report, showing the condition of the public works and property of the city under the government, control and management of said Board, for the fiscal year ended December 31st 1906.

To the Board of Street and Water Commissioners of the City of Newark, N. J.

GENTLEMEN:—Herewith are transmitted detailed reports of the several departments under the control of your Board for the year ended December 31st, 1906, which have been arranged for presentation to the Mayor and Common Council of the City in accordance with Section 20 of Chapter 134 of the State Laws of 1891.

Respectfully submitted,

MORRIS R. SHERRERD,

Chief Engineer.

ANNUAL REPORT

OF THE

General Superintendent of Works.

REPORT OF
General Superintendent of Works

NEWARK, N. J., Dec. 31st, 1906.

MR. MORRIS R. SHERRERD, CHIEF ENGINEER,

Board of Street and Water Commissioners of the City of Newark, N. J.

DEAR SIR:—Herewith is submitted the annual report for the year 1906 of the operation and expenditures of the various departments under the supervision of the General Superintendent of Works.

You will notice by the report of the Street and Highway Department that with the increased appropriation much more street cleaning has been done than in past years, the total cost of this was: $168,727.10, the details as to wages, salaries and supplies will be found in an other part of this report.

The sweeping of the streets by machines during the day time has been continued and has been found to be effective and economical, great care being taken to sprinkle the streets so that little dust is raised.

The recommendations made in the last annual report as to the advisability and economy of purchasing an additional stable is hereby renewed.

The purchase of two additional sweeping machines and three dump wagons is also recommended.

The block system for cleaning streets which was introduced some time ago, is still continued and is giving satisfactory results.

The repairs to bridges cost $998.48 during the year, a like amount, barring accidents, will be necessary for the coming year.

With the aid of the new steam roller, street repairs have been more easily made, many of the unpaved streets have been regraded, repairs have been made to the Telford pavement and very much work has been done to the streets paved with stone, the cost of this work was; $32,117.87.

The account for repairs to asphalt streets the total cost of which was $43,725.32 includes the maintenance, allowance for pavements laid under contract as well as the work done by the employees of the Board.

The purchase of a new grading machine is also recommended for use in the outlying districts where there are many miles of unpaved streets.

PUBLIC BATHS

The cost of keeping the Public Baths open, during the ten months of the past year was: $9,618.86, which would be $961.86 per month; to keep them open the entire year the cost would be $11,542.56.

The monthly attendance is given in the tables appended to this report, also the cost of supplies and wages.

STREETS AND HIGHWAYS 1906

Expenditures

(Street Cleaning)

	Weekly Pay Rolls.	Monthly Salaries.	Supplies	Totals.
January	$9,091.13	$291.66		
February	7,550.65	291.66	$473.61	
March	14,337.13	291.66	730.86	
April	14,032.60	401.66	2,229.09	
May	12,814.02	401.66	433.88	
June	12,200.51	401.66	741.42	
July	16,754.76	401.66	759.44	
August	15,271.39	401.66	1,746.21	
September	13,460.68	401.66	827.81	
October	11,924.60	401.66	1,113.02	
November	15,266.16	401.66	548.44	
December	10,990.38	447.44	893.61	
Totals	$153,694.01	$4,535.70	$10,497.39	$168,727.10

(Street Repairs)

	Weekly Pay-Rolls.	Salaries.	Supplies.
January	$441.96	$166.66	
February	301.64	166.66	$402.80
March	336.25	166.66	213.50
April	1,095.69	276.66	74.24
May	1,502.12	276.66	455.05
June	1,582.93	276.66	800.32
July	1,505.51	276.66	785.85
August	3,213.34	276.66	4,224.38
September	2,313.16	276.66	1,777.19
October	2,618.60	276.66	1,170.37
November	2,292.28	276.66	1,205.21
December	559.95	276.74	304.36
Totals	$17,763.43	$2,990.00	$11,413.27	$32,166.70

(City Stables)

	Weekly Pay-Rolls.	Salaries.	Supplies.
January	$486.00		$103.02
February	364.50		
March	607.50		116.19
April	486.00		916.21
May	486.00		281.13

	Weekly Pay-Rolls.	Salaries.	Supplies.	
June	$643.50		$93.65	
July	566.24		92.74	
August	739.04		361.52	
September	496.44		907.31	
October	488.04		414.67	
November	611.59		273.82	
December	613.12		332.04	
Totals	$6,587.97		$3,892.40	$10,480.37

(Blacksmith)

	Weekly Pay Rolls.		Supplies.	
January	$144.00			
February	108.00			
March	180.00		$51.96	
April	144.00			
May	144.00			
June	280.00		72.90	
July	144.00		6.00	
August	180.00		10.75	
September	144.00		87.82	
October	144.00			
November	180.00		28.48	
December	180.00		279.77	
Totals	$1,972.00		$537.68	$2,509.68

Under Miscellaneous the following expenditures were incurred for Electrical Machinist	722.17
For the services of Inspectors on the construction of Conduits this item was refunded by the Companies	449.75
For the services of Inspectors on Grade Crossings	168.00
Total Expenditures	$215,223.77

REPORT.

STREETS AND HIGHWAYS.

1906.

CLEANING:	Cubic yds.	Miles.	Cost.
Cleaning pavements by machine	32,908	1,221.89	$25,875.59
" block pavements by hand	8,132	297.24	9,713.96
" telford " " "	1,721	60.64	1,355.51

	Cubic yds.	Miles.	Cost.
Cleaning cobble pavements by hand	4,080	100.69	$5,274.31
" asphalt, brick and wood pavements by hand	21,138	7,051.74	25,006.79
Cleaning bitulithic pavem'ts by hand	882	71.57	789.54
" gutters and spots by hand	33,615	.....	37,733.29
Flushing streets	.....	.83	10.50
Removal of snow and ice	26,968	.....	6,170.81
Detail (Intersections)	2,393	.....	5,391.15
Picking papers (25,121 bags)	.....	.....	2,175.86
City Dumps	.....	.....	2,110.18
Garbage Inspectors	.....	.....	4,564.00
Removing street obstructions	.....	.....	487.46
Spreading sand	.....	.....	32.40
Dirt streets, grading and filling depressions	241	.....	765.93
Dirt streets, grading by machine	.....	62.57	2,707.19
Surveyors' helpers	.....	.....	785.75
Carpenter and helpers	.....	.....	1,218.50
STREET REPAIRS:			
Cobble pavements repaired, 80 places	.....	.....	407.98
Block pavements repaired, 1,385 places	.....	.....	7,596.02
Brick pavements repaired, 24 places	.....	.....	156.21
Telford pavements repaired, 15 places	.....	.....	87.95
Track Elevation (Street repairs)	.....	.....	559.58
Carting stone	.....	.....	113.35
Special foreman and inspectors (grading)	.....	.....	763.00
Engineer on steam roller	.....	.....	420.00
Watchmen " " "	.....	.....	194.72
Laborers in stone yard	.....	.....	59.84
Cutting out weeds	.....	.....	31.45
Carting for surveyors' dep't	.....	.....	21.25
Removing trees	.....	.....	227.87
Building board walks, Elizabeth ave	.....	.....	32.88
REPAIRING TELFORD PAVEMENTS, VIZ:			
Sussex avenue	.....	.....	88.53
Elizabeth avenue	.....	.....	291.84
Frelinghuysen avenue	.....	.....	60.50
Lake street	.....	.....	24.04
High street	.....	.....	257.81
Ogden street	.....	.....	109.64
Summer avenue	.....	.....	19.43
Peabody place	.....	.....	7.35

	Cubic yds.	Miles.	Cost
Warren street	.....	.....	$81.77
Frelinghuysen avenue (at engine house)	.....	.....	12.77
MISCELLANEOUS:			
Drivers, cleaning horses	.....	.....	474.80
Painting carts and stable	.....	.....	161.75
Carting for San Francisco Relief Committee	.....	.....	23.50
Inspectors on conduits	.....	.....	260.75
Timeing Cars	.....	.....	3.00
Inspectors on grade crossings	.....	.....	255.00
General miscellaneous	.....	.....	149.54
Weekly salaries	.....	.....	33,256.67
Acting foremen	.....	.....	1,036.71
Helper for keeper of tools	.....	.....	521.90
Inspector (E. Ward)	.....	.....	150.00
Extra laborers at stables	.....	.....	354.64
Totals weekly pay-rolls	132,078	8,867.17	$180,442.76

CASH RECEIPTS

1906.

STREETS AND HIGHWAYS.

Sale of Manure	$54.00
Redemption	412.40
Removal of snow	756.12
House moving	310.00
Sale of coats, hats and boots	10.90
" " wagons	14.00
" " carriage	50.00
" " rubber boots	15.50
" " iron	16.58
Horse hire	181.50
" shoeing and blacksmithing	1,116.64
Harness repairs	137.56
Sale of Horse	35.00
" harness	6.00
" of old hand scrapers	5.50
Board of horses (1906)	1,800.00
Inspectors	320.25
Street openings	4,244.00
Street repairs	1,157.76
Inspectors on conduits	1,011.50
Sale of stone	1,063.08

Rolling Telford Elizabeth Avenue.....	$5.00	
Repairing of Elizabeth Avenue.....	37.40	
Carting asphalt.....	8.71	
Sale of scraper.....	7.50	
Use of roller.....	182.35	
Sale of leather.....	3.50	
Total		$12,962.75

SEWERS AND DRAINAGE 1906

Expenditures

(Sewer Cleaning)

	Weekly Pay Rolls	Monthly Salaries.	Supplies.	Total.
January	$1,280.49	$141.66	$.....	
February	1,477.31	141.66	36.55	
March	2,184.09	141.66	602.50	
April	1,929.61	264.16	553.05	
May	1,971.20	264.16	582.00	
June	2,627.81	264.16	351.37	
July	2,101.03	264.16	96.80	
August	2,914.62	264.16	54.90	
September	2,395.92	264.16	76.85	
October	2,167.72	264.16	24.15	
November	3,082.57	264.16	853.05	
December	3,089.34	264.24	1,038.00	
Totals	$27,221.71	$2,802.50	$4,269.22	$34,293.43

(Sewer Repairs)

	Weekly Pay Rolls.	Monthly Salaries.	Supplies.	Total.
January	$270.75	$.....	$.....	
February	757.30	.....	300.13	
March	562.75	.....	133.43	
April	449.15	.....	283.09	
May	713.09	.....	568.25	
June	519.60	.....	155.01	
July	531.00	.....	147.73	
August	388.20	.....	252.65	
September	365.50	.....	344.10	
October	414.55	25.00	148.76	
November	606.18	25.00	257.28	
December	410.20	25.00	1,148.18	
Totals	$5,988.27	$75.00	$3,738.61	$9,801.88

(Pumping Station)

	Weekly Pay-Rolls.	Monthly Salaries.	Supplies.	Total.
January	$409.08	$100.00	$.....	
February	520.44	100.00	1,798.92	
March	681.80	100.00	20.38	
April	545.44	100.00	19.75	
May	545.44	100.00	221.34	
June	681.80	100.00	59.05	
July	545.44	100.00	69.57	
August	681.80	100.00	662.33	
September	545.44	100.00	837.23	
October	545.44	100.00	295.00	
November	681.80	100.00	129.84	
December	687.08	100.00	4,917.32	
Totals	$7,071.00	$1,200.00	$9,030.73	$17,301.73

(City Stable)

	Weekly Pay-Rolls.	Monthly Salaries.	Supplies.	Total.
May	.....	.....	$507.50	
June	.....	.....	598.83	
September	.....	.....	427.67	
October	.....	.....	152.15	
November	.....	.....	637.67	
December	.....	.....	638.13	
Totals	.....	.....	$2,961.95	$2,961.95

(Miscellaneous)

April—City proportion for maintenance of joint outlet sewer	$600.00
August—City proportion for maintenance of joint sewer outlet	600.00
September—Professional services	25.00
Total expenditures of department	$65,583.99

DETAIL OF WORK.

	Loads.	Costs.
Basins cleaned (4,469)	7,463	$7,957.85
Sewers cleaned (210,995 feet)	1,705	6,542.75
Chambers cleaned at pumping station	2,365	517.50
Repairs, etc., pumping station		118.25
Basins Repaired		755.45
General Repairs		431.50
Examining sewers and basins (detail men)		1,491.90

	Loads.	Costs
Ditches cleaned (36,932 feet)	172	$1,488.50
Ditches repaired		255.00
Surveyors' help		698.75
Carpenter		476.75
Sumps cleaned	132	275.00
Inspecting sewers for repairs		389.75
Building Basins		316.45
" man holes		93.15
Miscellaneous (Salaries)		14,311.95
Painting Dredger		9.00
Level bank at Peddie Street Ditch		1,042.59
Removing snow from basins		209.50
Painting carts		35.00
Repairing tank Morris Avenue Bath House		21.75
Filling in culvert Elizabeth Avenue		30.00
Building window in blacksmith shop		24.50
Replacing manhole heads		87.35
Building drain and draining pond at So. 19th Street and 15th Avenue		82.75
Building new pipe sewer (Grant Street)		93.00
Repairing between tracks (Ferry Street)		26.80
Digging up Hunterdon Street ditch		305.75
Repairing over and around basins		106.40
Repairing man holes		11.25
" " "		75.90
Excavating Clinton Avenue sewer		11.50
Carting weeds		31.50
Digging Peddie Street ditch		96.25
Rebuilding side basin 325 Market Street		30.25
Cleaning Flush Tanks		13.25
Man at city dumps		98.94
SEWERS REPAIRED:		
Earl Street		533.80
Ferry Street		91.10
West Street		9.75
Broad Street and Clinton Avenue		22.00
Belleville Avenue and Clark Street		4.50
Sixteenth Avenue		11.00
Boyd Street and Waverly Avenue		8.50
Lang Street		5.25
William Street		12.00
South Street		130.50
Hamilton Street		4.30

	Costs.
Walnut Street (284)	$1.50
High and James, New and Orleans Street	9.75
East Kinney Street (284)	.50
Wickliffe and Academy, Norfolk and Cabinet Sts.	5.75
Hamburg Place	38.00
North Canal Street (16)	7.50
Congress Street (96)	33.70
Polk Street (114)	3.50
Madison Street	129.50
Mulberry Street (95)	4.50
Barclay Street	9.75
Lock Street	13.75
Elm Street, Adam, South Streets	5.25
Academy Street	8.20
Centre Street	35.75
New Street (320)	7.50
Springfield Avenue	400.10
Jones Street	28.80
Nesbitt Street	7.50
Ridgewood Avenue	173.75
Total	$40,280.98

CASH RECEIPTS.

1906.

SEWERS AND DRAINAGE.

	Costs
Sewer Taps	$22,250.00
Flushing private sewers	7.50
Raising manholes	32.05
Sale of cement bags	4.70
Sale of old iron	130.80
Building manholes	48.05
Building basins	223.80
Repairing tank, Morris Avenue bath	21.25
Shifting manholes	50.70
Sale of horses	75.00
Basin repairs	25.00
Repairing basin connections	13.75
Shifting basins	14.65
Sale of sewer lid	5.00
	$22,902.25

	Scavenger Help.	Detail William St. Office.	Blacksmith.	Sundry Inspectors.	Painter.	Sundry Labor.	Totals.
January				$91.00			
February	$140.00	$48.00	$144.00	64.94	$36.00	-------	$10,254.09
March	150.00	48.00	144.00	41.50	18.00	-------	11,563.05
April	279.00	60.00	180.00	50.75	22.00	-------	15,100.51
May	228.00	48.00	144.00	69.50	26.25	-------	16,562.14
June	228.00	48.00	144.00	10.50	-------	-------	16,051.77
July	228.00	48.00	144.00	168.00	-------	-------	13,058.17
August	273.00	48.00	144.00	-------	-------	-------	16,166.26
September	285.00	60.00	180.00	-------	-------	$31.50 115.00	19,403.77
October	228.00	48.00	144.00	89.00	-------	45.40	16,414.28
November	264.00	48.00	144.00	72.00	-------	103.74	15,175.24
December	345.00	60.00	180.00	104.04	-------	6.00	18,350.03
	390.00	60.00	180.00	-------	-------	3.00	12,343.45
Totals	$3,038.00	$624.00	$1,872.00	$761.23	$102.25	$304.64	$180,442.76

[illegible]	Totals.
2.00	$2,772.57
0.50	2,732.81
7.00	3,175.14
3.00	3,208.27
5.00	3,206.98
---	3,031.38
---	3,177.47
1.00	3,984.62
0.00	3,306.86
5.00	3,127.71
3.25	4,370.55
2.00	4,186.62
1.75	$40,280.98

DXC

REPORT OF THE

Dep't of Repairs to Asphalt Streets.

During the year of 1906 repairs (ranging from one yard on Chestnut street to one thousand one hundred and forty-seven on Broad street, were made to the sixty-four of the seventy-three streets paved with asphalt, these streets comprising those upon which owing to the expiration of guarantee the Department has assumed the maintenance.

By carefully collecting all the available asphalt material nearly a sufficient quantity to meet the requirements of the repair work has been secured. Besides the economy effected thereby, it has been found that by mixing the old with the new, good results can be obtained, particularly for the wearing surface.

There is now on hand about four hundred tons of this material stored in the New York avenue and the Summer avenue city lots and in the yard of the Summer avenue Bath House.

Among the expenditures of the year was one of $260.77 for making the necessary repairs to the different asphalt wagons and tools.

The receipt for repairs of street openings and general work of this character were $6,675.43.

The following tabulations will show the location, and aggregate of work and the cost of the same.

REPAIRS TO ASPHALT STREETS, 1906.

Location. of work.	Water & Sewer Cuts No of Sq. yards.	Contract Work No. of Sq. yards.	General Repairs No. of Sq. yards.	Total No. of Sq. Yds.
Astor Street	.....	107.54	90.19	197.73
Broad Street	22.19	96.98	1,028.53	1,147.70
Bruce Street	.....	.....	100.57	100.57
Bank Street	.....	52.62	56.71	109.33
Camp Street	.....	1.94	3.66	5.60
Chestnut Street	.....	.....	1.00	1.00
Canal Street	.....	71.21	314.16	385.37
Camden Street	.....	4.50	12.75	17.25
Clinton Avenue	.....	6.95	23.18	30.13
Clinton Street	.....	32.21	42.86	75.07
Crane Street	.....	5.56	7.46	13.02
Cedar Street	.....	77.97	21.02	98.99
Clifton Avenue	.....	.....	46.54	46.54
Elm Street	.....	2.84	9.52	12.36
East Park Street	.....	2.52	138.48	141.00
Elizabeth Avenue	.....	9.01	.....	9.01
Eagles Street	.....	2.51	2.53	5.04
Fulton Street	.....	8.75	40.68	49.43
Fourth Avenue	21.44	.....	.....	21.44
Franklin Street	.....	1.50	6.43	7.93
Grant Street	.....	26.01	11.85	37.86
Garside Street	.....	2.66	.....	2.66
Gould Avenue	.....	8.07	294.45	302.52
Gouverneur Street	.....	.....	58.22	58.22
Harvey Street	.....	.....	232.08	232.08
Holland Street	3.33	.....	.....	3.33
Halsey Street	2.04	733.17	355.53	1,090.74
James Street	.....	.....	2.44	2.44
John Street	.....	1.23	.....	1.23
La Grange Place	.....	.....	19.22	19.22
Littleton Avenue	21.51	75.10	335.30	431.91
Lafayette Street	.....	.....	22.46	22.46
Murray Street	.....	2.91	8.75	11.66
Mt. Prospect Avenue	.....	9.70	484.87	494.57
Mott Street	15.89	.....	.....	15.89
Newton Street	.....	1.08	306.27	307.35
North Sixth Street	5.90	1.98	2.51	10.39
North Seventh Street	8.65	.....	.....	8.65
New Street	.....	133.66	254.18	387.84
Nursery Street	.....	.....	13.11	13.11

Location of work.	Water & Sewer Cuts No. of Sq. yards.	Contract Work No. of Sq. yards.	General Repairs No. of Sq. yards.	Total No. of Sq. Yds.
Ninth Avenue	6.70	.....	.....	6.70
Nutria Street	6.14	.....	.....	6.14
Orchard Street	.....	.....	23.76	23.76
Oriental Street	.....	36.25	50.41	86.66
Ogden Street	.....	6.87	7.76	14.63
Pennington Street	9.47	4.58	.....	14.05
Parker Street	.....	2.08	2.34	4.42
Park Place	.....	4.08	886.08	890.16
Pennsylvania Avenue	.....	1.76	12.91	14.67
South Street	.....	1.33	44.78	46.11
South Sixth Street	75.98	10.43	11.41	97.82
South Seventh Street	109.42	38.45	38.71	186.58
South Eighth Street	41.17	37.44	19.36	97.97
South Thirteenth Street	.....	.....	58.98	58.98
Sherman Avenue	8.47	.....	2.44	10.91
Summer Avenue	.....	16.95	816.17	833.12
State Street	.....	6.26	10.50	16.76
Sixth Avenue	.....	.....	112.78	112.78
Taylor Street	.....	2.66	.....	2.66
Tichenor Street	.....	.....	6.59	6.59
Thomas Street	.....	.....	5.73	5.73
Thirteenth Avenue	.....	19.56	76.90	96.46
Third Street	5.53	1.34	94.45	101.32
Third Avenue	.....	.....	48.75	48.75
Washington Street	.....	10.02	332.67	342.69
Washington Place	.....	15.59	286.45	302.04
Washington Avenue	.....	6.14	.....	6.14
William Street	.....	2.08	49.43	51.51
Waverly Avenue	.....	.....	4.89	4.89
Wakeman Avenue	.....	.....	1.06	1.06
Totals	363.83	1,704.05	7,352.82	9,420.70
Cost				$13,861.27

REPAIRS TO ASPHALT STREETS.

The following tabulations will show the general Maintenance as per contract with the Standard Bitulithic Company.

Location.	No. of Sq Yds.
Mt. Prospect Avenue	3,274.00
Waverly Avenue	85.20
Somerset Street	584.66
Wright Street	136.54

Location.	No of Sq. Yds
Court Street	$4.21
Elizabeth Avenue	73.89
Sherman Avenue	43.58
Orchard Street	1,039.85
Tichenor Street	368.01
South Street	218.49
Clinton Avenue	376.60
Chestnut Street	12.66
Camp Street	251.36
Pennington Street	86.71
Pennsylvania Avenue	146.07
Thomas Street	121.54
Lincoln Park	73.19
Halsey Street	147.21
Rose Street	64.67
Barclay Street	1,043.06
*Barclay Street	1,497.62
Elm Street	78.92
Walnut Street	190.15
Lafayette Street	463.16
Newton Street	191.38
Littleton Avenue	74.29
Camden Street	428.48
Court Street	4,059.00
Holland Street	83.00
South Sixth Street	419.00
Total	$15,636.50
Cost	15,441.27

*Re-surface.

In connection with the foregoing there was also expended, on account of the outstanding asphalt contracts for the general purpose of repairs and maintenance under the terms of the five year guarantee in said contracts.....$14,422.78

SUMMARY.

Weekly Pay Rolls and Supplies	$13,861.27
Asphalt Maintenance, as per contract with the Standard Bitulithic Company	15,441.27
Maintenance, as per five year term of guarantee on outstanding contracts	14,422.78
Total Expenditure for Repairs of Asphalt Pavements	$43,725.32

REPAIRS TO ASPHALT STREETS

EXPENDITURES, 1906.

	Weekly Pay Rolls.	Supplies.	Maintenance & Repairs.	City Stables
January	$251.80	.....	.....	.....
February	204.75	$94.27	.....	.....
March	183.55	326.30	$127.86	.....
April	381.15	30.40	14.00	.....
May	638.70	17.29	.....	.....
June	933.15	6.50	953.53	.....
July	756.30	90.16	1,885.72	.....
August	908.90	257.04	7,580.28	$322.50
September	847.85	.....	212.25	.....
October	1,037.80	148.75	8,180.00	.....
November	1,334.50	3,129.54	1,541,85	.....
December	831.70	655.95	9,368.56	472.42
Totals	$8,310.15	$4,756.20	$29864.05	$794.92

Total Expenditures.....$43,725.32

CROSS WALKS.

It will require an addition of $500.00 to the general Appropriation for the maintenance of this Department for the coming year.

Heretofore it has not been necessary to purchase any Bridge Stone as the supply, on hand was found adequate; with the exception of the latter part of last year, it was then found necessary to expend the sum of $215.24 for new stone. As the supply is about gone $500.00 will be needed for this material to meet our needs for the coming year.

CROSS WALKS.

EXPENDITURES 1906.

	Pay Rolls.	Supplies.	Repairs.	Stable	Total.
January	$162.82	....	....	....	....
February	174.35	....	....	....	....
March	124.98	....	....	....	....
April	142.02	....	....	....	....
May	38.55	$33.50	....	....	....
June	509.90	5.00	$1.25	....	....

	Pay Rolls.	Supplies.	Repairs.	Stable.	Total.
July	675.60	....	....	....	....
August	426.60	....	....	....	....
September	517.85	139.39	27.70	....	....
October	212.65	40.60	....	....	....
November	272.65	....	....	....	....
December	93.60	38.25	....	775.50	....
Totals	$3,350.57	$256.74	$28.95	$775.50	$4,411.76

CROSS WALKS.

	No. of Repairs.	Cost of Repairs.	No. of Walks.	Cost of Walks.	Totals.
January	9	$121.04	6	$121.20	$242.24
February	3	73.64	1	46.29	119.93
March	18	127.95	..	....	127.95
April	17	141.05	..	....	141.05
May	2	16.95	1	11.55	28.50
June	28	257.60	20	235.35	492.95
July	40	409.40	22	266.20	675.60
August	30	217.00	11	209.60	426.60
September	28	179.80	25	338.05	517.85
October	25	180.25	2	32.40	212.65
November	4	31.08	12	241.57	272.65
December	2	12.10	5	80.50	92.60
Totals	206	$1,767.86	105	$1,582.71	$3,350.57

CROSS WALKS.
(Summary).

RECEIPTS.

Appropriation, Tax Ordinance	$4,000.00	
Balance 1905 and other sources	965.33	
Total		$4,965.33

DISBURSEMENTS.

Sundry pay rolls	$3,350.57	
Carriage and wagon repairs	61.20	
Car fare	5.00	
Tools	4.25	
Bridge stone	215.24	
Provender	775.50	
		$4,411.76
Balance		553.57
		$4,965.33

PUBLIC BATHS.

DISBURSEMENTS.

1906.

	Weekly Pay Roll.	Maintenance & Supplies.	Repairs.	Cost.
January	$351.00	.....	.....	.....
February	177.00	172.91	$405.12	.....
March	233.50	118.30	.....	.....
April	528.00	56.99	395.82	.....
May	630.00	291.07	215.40	.....
June	783.00	55.55	.....	.....
July	624.00	182.55	1.50	.....
August	795.00	291.05	.....	.....
September	624.00	144.74	11.02	.....
October	624.00	56.86	.....	.....
November	780.00	307.74	.....	.....
December	345.00	266.52	151.22	.....
Totals	$6,494.50	$1,944.28	$1,180.08	$9,618.86

PUBLIC BATHS.

Attendance at Public Baths during 1906.

	Summer Av.		Walnut St.		Morris Av.	
	Males.	Females.	Males.	Females.	Males	Females
January	520	4	1,120	293	548	6
February	...	...	...	...	...	...
March	...	...	...	...	...	...
April	2,535	68	3,325	444	1,987	77
May	2,917	191	3,650	286	3,195	128
June	5,334	498	8,350	1,046	5,350	282
July	6,500	897	14,490	1,471	7,249	784
August	5,874	586	13,490	2,180	9,153	793
September	1,720	1,272	5,150	910	3,014	182
October	1,633	66	1,335	310	1,198	123
November	1,587	25	710	120	1,034	48
December	46	...	...	...	84	...
Totals	28,666	3,607	51,620	7,060	32,812	2,423
						32,812
						7,060
						51,620
						3,607
						28,666
Total attendance						126,188

SIDEWALKS.

EXPENDITURES, 1906.

	Weekly Pay Roll.	Supplies.	Repairs.	Stable.	Total
January	$64.50	....	.....	.....	.....
February	72.00	$5.00	$14.08	.....	.....
March	105.50	5.00	.....	.....	.....
April	117.00	30.00	.....	.....	.....
May	128.00	.....	107.80	.....	.....
June	160.00	.....	.....	.....	.....
July	120.00	21.25	.....	.....	.....
August	160.00	5.00	746.65	.....	.....
September	134.00	11.25	343.40	.....	.....
October	140.00	4.00	1,270.55	.....	.....
November	175.00	16.00	.....	.....	.....
December	175.00	10.00	896.98	$199.80	.....
Totals	$1,551.00	$107.50	$3,379.46	$199.80	$5,237.76

DEPARTMENT OF SIDEWALKS.

New walks laid by property owners	106,066	sq. ft.
Walks relaid by property owners	339,428	" "
Concrete walks laid by property owners	477,053	" "
New walks laid by order of the Board	26,691	" "
Walks relaid by order of the Board	8,284	" "
New walks laid by ordinance as per contract	23,794	" "
Concrete walks laid by ordinance as per contract	3,180	" "
Total	984,496	" "
Curb laid by property owners	5,150	lineal feet

BRIDGES.

EXPENDITURE 1906.

	Weekly Pay Roll.	Supplies & Maintenance.	Totals.
January	....	....	....
February	$20.75	....	....
March	4.00	$75.37	....
April	3.00	....	....
May	26.25	....	....

	Weekly Pay Roll.	Supplies & Maintenance.	Totals.
June	....	....	....
July	$42.24	....	....
August	....	$168.49	....
August	....	168.49	....
September	20.00	47.60	....
October	40.75	....	....
November	84.25	109.52	....
December	39.75	316.50	....
Totals	$281.00	$717.48	$998.48

CASH RECEIPTS.

1906.

MISCELLANEOUS DEPARTMENTS.

Wharves	$1,210.00
Public Lighting	163.73
Public Baths	1,266.10
Repairs to asphalt streets	6,675.43
Track elevation	222.75
House sewer connections	161.02

DISTRIBUTION OF PAY ROLLS.

REPAIRS TO ASPHALT STREETS.

	Foreman.	Laborers.	Horse & Wagon Hire.	Drivers.	Inspectors.	Totals.
January	$72.00	$194.00	$2.80	$32.75	$31.50	$333.05
February	72.00	50.50	.....	19.00	.....	141.50
March	90.00	97.80	.....	17.25	.....	205.05
April	80.00	331.60	38.85	41.50	.....	491.95
May	80.00	411.65	81.55	43.50	52.50	669.20
June	80.00	410.05	135.55	42.75	84.00	752.35
July	80.00	474.45	70.35	47.50	84.00	756.30
August	100.00	552.25	90.65	61.00	105.00	908.90
September	80.00	496.85	136.50	50.50	84.00	847.85
October	80.00	599.95	224.85	49.00	84.00	1,037.80
November	100.00	830.50	239.50	53.50	111.00	1,334.50
December	100.00	461.40	110.05	60.25	100.00	831.70
Totals	$1,014.00	$4,911.00	$1,130.65	$518.50	$736.00	$8,310.15

BRIDGES.

	Carpenter.	Laborers.	Horse & Wagon Hire.	Painter.	Totals.
January	....	....	....	....	....
February	$6.00	$14.75	....	....	$20.75
March	6.00	1.00	....	....	7.00
April	....	....	....	....	....
May	15.00	11.25	....	....	26.25
June	....	....	....	....	....
July	21.00	21.25	....	....	42.25
August	....	....	....	....	....
September	9.00	11.00	....	....	20.00
October	18.00	17.50	$5.25	....	40.75
November	48.00	32.75	3.50	....	84.25
December	12.00	17.75	....	$10.00	39.75
Totals	$135.00	$127.25	$8.75	$10.00	$281.00

DISTRIBUTION OF PAY ROLLS.

1906.

CROSS WALKS.

	Sup't.	Labor.	Drivers	Horse & Wagon Hire.	Cost.
January	$80.00	$114.69	$44.75	$2.80	$242.24
February	80.00	28.68	11.25	....	119.93
March	100.00	4.20	23.75	....	127.95
April	....	109.00	25.75	6.30	141.05
May	....	16.95	....	11.55	28.50
June	....	417.75	44.75	30.45	492.95
July	....	588.55	44.00	43.05	675.60
August	....	340.95	65.00	20.65	426.60
September	....	469.00	48.25	....	517.85
October	....	164.65	48.00	....	212.65
November	....	216.40	56.25	....	272.65
December	....	70.85	21.75	....	92.60
Totals	$260.00	$2,542.27	$433.50	$114.80	$3,350.57

DISTRIBUTION OF PAY ROLLS.

PUBLIC BATHS.

	Sup't.	Ass'ts.	Firemen.	Matrons.	Sundries.	Cost.
January	$144.00	$100.00	$150.00	$18.00	....	$412.00
February	.....	.....	.....	....	$152.00	152.00
March	.....	.....	.....	....	233.50	233.50
April	225.00	187.50	187.50	48.00	6.00	654.00
May	216.00	180.00	180.00	48.00	....	624.00
June	216.00	180.00	180.00	48.00	3.00	627.00
July	216.00	180.00	180.00	48.00	....	624.00
August	270.00	225.00	225.00	60.00	15.00	795.00
September	216.00	180.00	180.00	48.00	....	624.00
October	216.00	180.00	180.00	48.00	....	624.00
November	270.00	225.00	225.00	60.00	....	780.00
December	54.00	67.50	67.50	12.00	144.00	345.00
Totals	$2,043	$1,705.00	$1,755.00	$438.00	$553.50	$6,494.50

TRACK ELEVATION

	Inspectors.	Laborers.	Horse & Wagon Hire.	Totals.
May	$59.50	$520.15	$115.85	$695.50
June	71.75	403.45	152.25	627.45
July	29.75	134.10	58.45	222.30
October	....	59.30	.....	59.30
December	....	92.40	.....	92.40
Totals	$161.00	$1,209.40	$326.55	$1,696.95

SIDEWALKS.

	Inspectors.	Ass't In's.	Totals.
January	$72.00	$10.50	$82.50
February	72.00	....	72.00
March	90.00	25.50	115.50
April	80.00	41.00	121.00
May	80.00	48.00	128.00
June	80.00	48.00	128.00
July	80.00	40.00	120.00
August	100.00	60.00	160.00
September	80.00	54.00	134.00
October	80.00	60.00	140.00
November	100.00	75.00	175.00
December	100.00	75.00	175.00
Totals	$1,014.00	$537.00	$1,551.00

DISTRIBUTION OF PAY ROLLS.
SCAVENGER.

	Inspectors.	
January	$346.00	
February	346.00	
March	432.50	
April	346.00	
May	346.00	
June	346.00	
July	346.00	
August	495.50	
September	430.00	
October	430.00	
November	537.50	
December	539.50	
Totals	$4,941.00	$4,941.00

RECAPITULATION.

Streets and highways	$180,442.76
Sewers and drainage	40,280.98
Cross walks	3,350.57
Public baths	6,494.50
Repairs to asphalt streets	8,310.15
Scavenger	4,941.00
Track elevation	1,696.95
Bridges	281.00
Sidewalks	1,551.00
Total	$247,348.91

STREETS AND HIGHWAYS.
CARPENTER'S REPORT.
YEAR 1906.

Stable Repairs	$167.25	
Walk Repairs	21.38	
Removing Obstructions	3.00	
Office Work (Old City Hall)	12.50	
Removing Trees	6.00	
Construction of Shed for Steam Roller	38.00	
Repair Tools	27.00	
Street Signs	62.50	
General Jobbing	855.00	
		$1,192.63

SEWERS AND DRAINAGE.

Stable Repairs	$109.25	
Pumping Station Repairs	24.00	
Tool Repairs	24.00	
Repairing Drain (Gully Road)	19.50	
General Jobbing	285.00	
		$461.75

PUBLIC BATHS.

Summer Avenue, Repairs	66.00	
Morris Avenue	3.00	
		69.00

BRIDGES.

Plane Street	$39.75	
Old Bloomfield Road	35.00	
Orange Street	3.00	
Commercial Street	7.00	
Madison Street	80.00	
Halsey Street	26.00	
Washington Street	12.75	
Wright Street	4.25	
River Street	26.00	
Vanderpool Street	7.50	
Chester Avenue	17.50	
Painting	22.25	
		281.00
Total for all Departments		$2,004.38

During the year, very many complaints of a general nature in regard to street and sidewalk obstructions were received; these were all investigated, and the same removed, in all cases where owners did not comply with the notices of removal and for the redemption of such confiscated material the charge of removal has always been exacted.

In connection herewith the following figures are submitted:

Number of Complaints	416
" " Obstructions removed by Owners	333
" " Obstructions removed by Department	55
" " Complaints referred to Police Department	28
" " Obstruction Permits granted to Builders'	580
" " Miscellaneous Permits granted	126
" " Sidewalk Permits granted	1,534

Amount collected for the redemption of confiscated material $426.50

SCAVENGER SERVICE REPORT, 1906.

Herewith is submitted the report of the Scavenger Service for the past year.

In removing the work under the present system there is still a chance for improvement, which cannot be made under the existing contract.

It is a matter of congratulation to observe that we have had but fifty-one complaints against ninety-nine of the previous year, the majority of which were made during the winter months.

The amount of ashes, rubbish material, garbage and paper collected was as follows:

	ASHES AND RUBBISH MATERIAL.	GARBAGE.	PAPER.
January	34,440 cubic yards.	1,292 tons.	20,400 lbs.
February	33,220 " "	1,265 "	23,000 "
March	33,046 " "	1,212 "	24,980 "
April	27,551 " "	1,280 "	29,100 "
May	26,950 " "	1,287 "	30,150 "
June	25,140 " "	1,641 "	25,760 "
July	24,751 " "	1,803 "	26,200 "
August	25,670 " "	1,992 "	25,420 "
September	27,191 " "	2,202 "	26,000 "
October	31,468 " "	2,187 "	23,300 "
November	33,051 " "	1,405 "	19,000 "
December	35,872 " "	1,191 "	20,200 "
Totals	3,583.50 " "	18,757 "	29,351.10 "

CITY STABLES, 1906.

Total cost of City Stables, including amounts paid by departments other than Streets and Highways:

Streets and Highways, charged directly to this account.

Wages		$6,587.97	
Supplies, provender and equipment		3,892.40	
Blacksmith shop wages	$1,972.00		
Supplies	537.68		
		2,509.68	
			$12,990.05

Bills paid by other departments direct as part of City Stables expense:

Repairs to asphalt streets	794.92	
Sewers and drainage	2,961.95	
Sidewalks	199.80	
Crosswalks	775.50	
Public lighting	459.49	
		$5,191.66
Total cost City Stables		$18,181.71

DEPARTMENT OF POLES AND WIRES.

POLES, CABLES, CONDUCTORS, WIRES, CONDUITS, SINGLE DUCTS AND MAN-HOLES WITHIN THE LIMITS OF THE CITY OF NEWARK.

PUBLIC SERVICE CORPORATION OF NEW JERSEY. STREET RAILWAY DEPARTMENT.

	WOOD.	IRON.	
Number of poles Dec. 31, 1905.....	36	4,711	4,747
" " " removed during year..	6	0	
" " " Dec. 31, 1906.....			4,741
Decrease			6

Number of miles of cable, aerial, Dec. 31, 1906—

1,000,000 C. M.....	.24 miles	
750,000 C. M.....	.12 "	
500,000 C. M.....	67.662 "	
211,600 C. M.....	36.767 "	
		104.789

Number of miles of cable in subways, Dec. 31, 1906—

1,000,000 C. M.....	17.08 miles	
750,000 C. M.....	1.872 "	
500,000 C. M.....	7.417 "	
2|0 3 Cond.....	11.22 "	
1,000,000 C. M. bare copper	10.141 "	
		47.730

Number of miles of wire—aerial—

1|0 trolley wire and 2|0 trolley wire	99.39
Number of miles of conduits Dec. 31, 1905.....	10.84
" " " " single duct Dec. 31, 1905.....	145.765
" " " " conduits Dec. 31, 1906.....	10.84
" " " " single duct Dec. 31, 1906.....	145.765
Number of manholes Dec. 31, 1905.....	174
" " " Dec. 31, 1906.....	174

UNITED ELECTRIC COMPANY OF NEW JERSEY.

	WOOD.	
Number of poles Dec. 31, 1905.....	5,833	
" " " erected during year.....	483	
" " " removed during year.....	208	
" " " replaced during year.....	221	
" " " Dec. 31, 1906.....		6,108
Increase.....		275

Number of miles of cable in subways Dec. 31, 1906.....	101.04
" " " " wire—aerial Dec. 31, 1906.....	626.8
" " " " conduits Dec. 31, 1905.....	7.4
" " " " single ducts Dec. 31, 1905.....	105.1
" " " " conduits Dec. 31, 1906.....	8.4
" " " " single ducts Dec. 31, 1906.....	111.8
Number of manholes Dec. 31, 1905.....	340
" " " Dec. 31, 1906.....	387

NEW YORK AND NEW JERSEY TELEPHONE CO.

	IRON	WOOD	
Number of poles Dec. 31, 1905.....		3,445	
" " " Dec. 31, 1905.....	1		
" " " erected		377	
" " " removed		36	
" " " replaced		95	
" " " Dec. 31, 1906.....	1	3,785	3,786
Increase.....			341
Number of miles of cable—aerial, Dec. 31, 1906.....			18.169
" " " " conductors—aerial Dec. 31, 1906..			962.316
" " " " cable in subways Dec. 31, 1906....			102.78
" " " " conductors in subways, Dec. 31, '06			41,106.5
" " " " conduits Dec. 31, 1905.....			33.33
" " " " single ducts Dec. 31, 1905.....			192.58
" " " " conduits Dec. 31, 1906.....			40.89
" " " " single ducts Dec. 31, 1906.....			236.90
Number of manholes Dec. 31, 1905.....			416
" " " Dec. 31, 1906.....			540

WESTERN UNION TELEGRAPH COMPANY.

Number of poles Dec. 31, 1906, wood.....	597
Number of miles of cable—aerial, Dec. 31, 1906.....	6
" " " " conductors and open wire, aerial, Dec. 31, 1906.....	478.17
" " " " cable in subways, Dec. 31, 1906....	1.75
" " " " conductors in subways Dec. 31, 1906	134.17
" " " " single duct.....	.176

NEWARK TELEPHONE COMPANY.

	WOOD.	
Number of poles Dec. 31, 1905.....	454	
" " " removed during year.....	5	
" " " replaced during year.....	2	
" " " Dec. 31, 1906.....		449
Decrease.....		5

Number of miles of cable—aerial, Dec. 31, 1906.....	1.25
" " " " conductors, aerial, Dec. 31, 1906...	1581.
" " " " cable in subways Dec. 31, 1906.....	18.70
" " " " conductors in subways Dec. 31, 1906	2334.
" " " " conduits Dec. 31, 1905.....	9.22
" " " " single ducts Dec. 31, 1905.....	44.64
" " " " conduits Dec. 31, 1906.....	9.22
" " " " single ducts Dec. 31, 1906.....	44.64
Number of manholes Dec. 31, 1905.....	84
" " " Dec. 31, 1906.....	86

NORTHEASTERN TELEPHONE AND TELEGRAPH CO.

	WOOD.	
Number of poles Dec. 31, 1905.....	251	
" " " replaced during year.....	42	
" " " Dec. 31, 1906.....		251
Number of miles of conductors—aerial, Dec. 31, 1906....		304.4
" " " " cable in subways Dec. 31, 1906.....		3.25
" " " " conductors in subways.....		643.50

POSTAL TELEGRAPH CABLE COMPANY.

This company has no poles, uses poles of United Electric Co. of N. J. and ducts of the N. Y. & N. J. Telephone Co.

Number of miles of aerial wire Dec. 31, 1906.....	125
" " " " conductors in subways Dec. 31, 1906..	50

NEWARK DISTRICT TELEGRAPH CO.

Number of poles Dec. 31, 1906, wood.....	4
Number of miles of cable—aerial, Dec. 31, 1906.....	.75
" " " " conductors, aerial, Dec. 31, 1906.....	8.
" " " " cable in subways Dec. 31, 1906.....	2.25
" " " " conductors in subways Dec. 31, 1906	229.

Company uses ducts of Telephone Companies.

POLICE DEPARTMENT SIGNAL SERVICE.

Maintained by N. Y. & N. J. Telephone Co.

Number of poles Dec. 31, 1905, wood.....	125	
" " " removed during year.....	10	
" " " Dec. 31, 1906.....		115
Decrease.....		10

Number of miles of cable—aerial, Dec. 31, 1906.....		.74
" " " " conductors—aerial, Dec. 31, 1906..		183.
" " " " open wires, Dec, 31, 1906.....		162.2
" " " " cable in subways Dec. 31, 1906....		9.71
" " " " conductors in subways Dec. 31, 1906		99.92

FIRE DEPARTMENT SIGNAL SERVICE.

Number of poles Dec. 31, 1905, wood.....		672
" " " erected during year.....	5	
" " " removed during year.....	7	
" " " Dec. 31, 1906.....		670
Decrease.....		2
Number of miles of cable—aerial, Dec. 31, 1906.....		.21
" " " " conductors and open wires, aerial, Dec. 31, 1906.....		138.21
" " " " cable in subways Dec. 31, 1906.....		18.34
" " " " conductors in subways Dec. 31, 1906		164.57

SUMMARY.

	Number of Poles.			Miles of Cable.			Miles of Conductors and Open Wire.			Miles of Conduits.	Miles of Single Ducts.	Number of Manholes.
	Wood.	Iron.	Total.	Aerial.	In Subways.	Total.	Aerial.	In Subways	Total.			
Public Service Corporation of New Jersey	30	4,711	4,741	104.789	47.730	152.519	99.39	--------	99.39	18.84	145.765	174
United Electric Company of New Jersey	6,108	----	6,108	------	101.04	101.04	626.8	--------	626.8	8.4	111.8	387
New York and New Jersey Telephone Co.	3,785	1	3,786	18.169	102.78	120.949	962.316	41,106.5	42,068.816	40.89	236.90	540
Western Union Telegraph Co.	597	----	597	6.	1.75	7.75	478.17	134.17	612.34	----	.176	----
Newark Telephone Co.	449	----	449	1.25	18.70	19.95	1581.	2,334.	3,915.	9.22	44.64	86
Northeastern Telephone & Telegraph Co.	251	----	251	------	3.25	3.25	304.4	634.50	947.90	----	------	----
Postal Telegraph Cable Co.	------	----	------	------	------	------	125.	50.	175.	----	------	----
Newark District Telegraph Co.	4	----	4	.75	2.25	3.	8.	221.	229.	----	------	----
Police Department Signal Service	115	----	115	------	9.71	9.71	345.2	99.92	445.12	----	------	----
Fire Department Signal Service	670	----	670	.21	18.34	18.55	138.21	164.57	302.78	----	------	----
Total	12,009	4,712	16,721	131.168	305.550	436.718	4,668.486	44,753.66	49,422.146	77.35	539.281	1,187

REPORT OF

The Engineer and Superintendent of the Department of Water

To the Chief Engineer of the Board of Street and Water Commissioners of the City of Newark.

DEAR SIR:—Herewith is submitted the report of the condition and operation of the work of the Department of Water for the year ended December 31st, 1906.

CONSUMPTION.

The number of new taps made during the year was 1617 (an increase of 330 over last year); of these 10 were of 6-inch diameter; 6 of 4-inch, 3 of 3-inch, 56 of 2-inch, 3 of 1½-inch, 157 of 1-inch and 1332 of ⅝-inch diameter.

The number of taps at the first of January 1906, in the city, was 41,610.

The following table gives the delivery of water to the distributing reservoirs (average consumption for 1906):

CONSUMPTION STATEMENT FOR THE YEAR ENDING DECEMBER 31ST, 1906.

MONTH, 1906.	Total Consumption per Month. Million Gallons.	Average Daily Consumption. Million Gallons.	Mean Temperature.	Rainfall in Inches.
January	970.8	31.3	36.1	2.36
February	1,042.3	37.2	31.1	1.91
March	1,028.8	33.2	33.3	4.98
April	947.4	31.6	52.1	5.68
May	989.1	31.9	62.4	3.77
June	1,009.7	33.7	71.0	2.63
July	1,080.0	34.8	74.3	3.71
August	1,129.8	36.4	75.0	2.46
September	1,116.1	38.7	69.3	3.54
October	1,082.7	34.9	55.0	4.23
November	1,003.2	33.4	44.2	1.37
December	1,204.7	38.8	31.9	6.18
Total	12,604.6			42.82

Average daily consumption equals 34,533,150 gallons.
Average daily consumption per tap equals 830 gallons.
Approximate number of taps at the end of the year equals 41,610.

The accompanying folder gives the consumption since 1892, when the gravity plant was introduced. The average daily consumption per tap was increased from 813 gallons in the year 1905 to 830 gallons per tap in 1906.

Detailed information in regard to street mains, services, meters, etc., may be found in the appended tables.

DISTRIBUTION.

The extensions to street mains in the city during the year 1906 were as follows:

110	lineal	feet of	20	inch	diameter.
4,195	"	"	16	"	"
2,569	"	"	12	"	"
2,686	"	"	10	"	"
2,788	"	"	8	"	"
33,140	"	"	6	"	"
4,226	"	"	4	"	"
49,714	lineal feet.				

The approximate mileage of pipe of different diameters in the city, deducting old pipes which were taken out, and adding new pipe of large size in place of the old pipe taken out, is as follows:

43,200	lineal	feet of	60	inch	diameter.
141,197	"	"	48	"	"
82,192	"	"	42	"	"
49,718	"	"	36	"	"
24,920	"	"	30	"	"
48,605	"	"	24	"	"
40,410	"	"	20	"	"
20,329	"	"	16	"	"
43,601	"	"	12	"	"
64,754	"	"	10	"	"
50,535	"	"	8	"	"
1,023,799	"	"	6	"	"

165,972 lineal feet of 4 inch diameter.
871 " " 3 " "

$$1{,}800{,}103 \text{ lineal feet} = 340 \frac{4903}{5280} \text{ miles.}$$

This does not include any pipe connected with the High Pressure system.

Belleville Township laid 3,815 feet of 6-inch diameter.

The total length of pipe connected with the works is as follows:

In the city..... $340 \frac{4903}{5280}$ miles.

Belleville Township..... $14 \frac{116}{5280}$ miles.

Total ..... $354 \frac{5019}{5280}$ miles.

The amount of work done in relaying was as follows:

2,334 feet of 24 inch pipe.
179 " " 20 " "
88 " " 16 " "
597 " " 10 " "
4,394 " " 6 " "
99 " " 4 " "

$$\text{Total....7,691 lineal feet} = 1 \frac{2411}{5280} \text{ miles.}$$

The amount of work done in the way of lowering pipe:

1,400	lineal	feet	of	12	inch	diameter.
5,082	"	"	"	6	"	"
1,100	"	"	"	4	"	"

Total 7,582 lineal feet $= 1 \frac{2302}{5280}$ miles.

During the year 173 new hydrants were set; of these 69 were substituted in place of old hydrants and 104 were added to the total number of new hydrants; making the total number of hydrants in the city 2,627.

The distribution system during the year has been extended and enlarged by the laying of approximately 10 miles of pipe, running in sizes from 4 to 24 inches. Part of this work was necessary to supplement the supply and give adequate fire protection in the recently annexed sections of the City, namely, Vailsburgh and Waverly.

An additional feeder line was laid to reach the Vailsburgh section which heretofore depended upon one line, and upon the completion of the additional line the Water Department is able to supply the entire territory embraced within Vailsburgh, the higher portion of which has heretofore been receiving its supply, even for a year after annexation, from the Essex and Union Light and Water Company.

For the Waverly section, the main feeder in South Broad Street was extended by the laying of about a mile of 16-inch pipe.

Considerable work has also been done in the way of extending pipes to reach the factories along the meadows in the neighborhood of the extension of Vanderpool Street, and there was also laid an 8-inch line in Doremus Avenue, the grading of which is now under way, with a branch line on Avenue R for the supply of factories recently erected near Newark Bay.

Carrying out the recommendation of last year's report, the old 24 inch cement pipe on 8th Avenue from Factory Street to Broad Street, a distance of 2,100 feet, was taken out and replaced by cast iron pipe. This section of cement pipe was the last piece of street main of this material connected with the distribution system, the removal of which became necessary on account of the numerous leaks developed on this line by the increased pressure which was installed last year throughout nearly the entire city.

During the coming year, I would also recommend the laying of a 20" main in Jefferson Street from Chestnut Street to South Street; a 24-inch main in South Street from Jefferson Street to Dawson Street; a 16-inch main in Dawson Street and Avenue C from South Street to Wright Street and in Wright Street from Avenue C to middle of Block between Avenue C and Avenue B.

I would further recommend the laying of a 16-inch main in Hamburg Place from Komorn to Gotthardt Street and a 20-inch main in Hamburg Place from Gotthardt Street to Avenue L; also a 12-inch main in Hamburg Place from Avenue L to Doremus Avenue.

HIGH PRESSURE SYSTEM.

In connection with the High Pressure System, one extension has been laid in Ward Street from Market to Mechanic Street of 12" dia., and south of Mechanic Street of 8 inches diameter. Additional extensions to the High Pressure System would also seem advisable, particularly along Front, Ogden and McWhorter Streets and New Jersey Railroad Avenue.

Water for the entire city has been supplied through the Cedar Grove Reservoir, and the operation of the water plant of the city which is now so thoroughly completed has been very satisfactory, and not only has the High Pressure system been furnished with adequate pressure from the

Cedar Grove reservoir, but the reports from the Board of Health show that the quality of the water throughout the city has been improved, due to the sedimentation resulting from the storage of a month's supply in the new reservoir.

In the watershed considerable work has been done at the Oak Ridge Reservoir, consisting of repaving 300 feet of core wall on spill-way and building 4 cut-off walls in order to prevent the water in the future from washing out paving; and also repaving and re-sodding of the outside dam. This being the first repair on this reservoir since the construction of the same in 1890 and 1891.

Some additional pieces of land have been secured for the better protection of the reservoirs, and the Board has also been able to set aside a considerable sum of money which may be devoted to the acquisition of such pieces of property as are offered at a reasonable price and several options have recently been secured on this basis.

It is gratifying to be able to report that the receipts of the Water Department were sufficient to pay all the cost of operation, interest and sinking fund on the outstanding bonds and that the department was able to pay off one bond of $50,000 from the receipts. Extensions of the distribution system for the year 1906 have also been made from the same sources without the issuance of bonds. This satisfactory financial condition of the department is due in large part to the increased consumption of metered water by factories working overtime, and also to the fact that the collections of water rents have been kept closely up to date so that there is a much smaller amount carried to arrears than has been the case heretofore.

REVENUE FROM WATER.

For revenue for water during the last year, see financial statement appended.

Respectfully submitted,

G. SANZENBACHER,

Engineer and Superintendent Department of Water.

DETAIL STATEMENTS

to accompany

Report of the Engineer and Supt.

Department of Water

STATEMENT OF PIPE LAID IN 1906.

Month, 1906.	LOCATION OF PIPE.	Length in Lineal Feet. 20 in.	16 in.	12 in.	10 in.	8 in.	6 in.	4 in.	Stops.	Hydrants.
Jan.	South 12th St. on the east and west sides from Clinton Ave. to the South side of Madison Ave.							2,906	4	2
"	Connecting South 12th St and Clinton Ave.						57		1	1
"	South 12th St. from Avon Ave. sou h						28		1	1
"	Cross connection across Madison Ave. on South 12th St.						80		2	1
"	Madison Ave. across South 12th St.						60			
"	South 16th St. from dead end south of 18th Ave. south						48			
"	Vernon Ave. from Cl nton Pl. east						259		1	1
"	15th Ave. from South 15th St. to Sou h 16th St						219			1
"	Earl St. from Sherman o Elizabe h Ave.						482		2	
"	Connecting 6 n. to 10 in at High St nd Centra Ave.						15			
"	Treat Pl from Branford l south						171			1
Feb.	Shanley Ave. from dead end nor h of Clinton Ave. to north curb of Ma lison Ave.			274					1	1
"	Shanley Ave. from north curb of Madison Ave. north						157		1	
"	Hunterdon St. from Hawthorne Ave. sou h to dead end						193		1	
"	Frelinghuysen Ave. from Princeton St to Weston Ave.		1,864						1	
"	Connecting 6 in. to 16 in. on Frelinghuysen Ave. a intersection of Poinier St.						21		1	
"	Connecting 6 in. to 16 in. on Frelinghuysen Ave. at Earl St.						53		2	
"	Connecting 6 in. to 16 in. on Frelinghuysen Ave. at Alpine St.						65		2	
"	Connecting 6 in. to 16 in. on Frelinghuysen Ave. at Hunter St.						40		1	
"	Connecting 6 in. to 16 in. on Frelinghuysen Ave. at Stanton St.						57		2	
"	Connecting 6 and 12 in. to 16 in. on Frelinghuysen Ave. a Bigelow Street			52			3		1	
"	Connecting 6 in. to 16 in. on Frelinghuysen Ave. at Clifton St.						70		2	
"	Connecting 6 in. to 16 in. on Frelinghuysen Ave. at Branford St.						65		2	
"	Connecting 6 in. to 16 in. on Frelinghuysen Ave. at Runyon St.						65		2	
"	Connecting 6 in. to 16 in. on Frelinghuysen Ave. at Concord St.						56		1	
"	Peddie St. from Frelinghuysen Ave. east					44			1	
	Carried forward		1,864	326		44	2,264	2,906	32	9

STATEMENT OF PIPE LAID IN 1906.

Month, 1906.	LOCATION OF PIPE.	Length in Lineal Feet. 20 in.	16 in.	12 in.	10 in.	8 in.	6 in.	4 in.	Stops.	Hydrants.
	Brought forward	-----	1,864	326	-----	44	2,264	2,996	32	9
Feb.	Connecting 6 in. to 16 in. on Frelinghuysen Ave. at Willow St.	-----	-----	-----	-----	22	-----	-----	1	----
"	Connecting 6 in. to 16 in. on Frelinghuysen Ave. at Victoria St.	-----	-----	-----	-----	-----	56	-----	2	----
"	Connecting 6 in. to 16 in. on Frelinghuysen Ave. at Meeker Ave.	-----	-----	-----	-----	-----	10	-----	1	----
"	Meeker Ave. from Frelinghuysen Ave. west	-----	-----	-----	-----	-----	41	-----	1	----
"	Connecting 6 in. to 16 in. on Frelinghuysen Ave. at Weston Ave.	-----	-----	-----	-----	55	-----	-----	1	----
"	Chadwick Ave. from Avon Ave. to south curb of West Rose St.	-----	-----	-----	-----	-----	256	-----	1	1
"	Chester Ave. from North 9th St. to North 11th St.	-----	-----	-----	-----	-----	537	-----	2	1
"	Connecting 6 in. to 20 in. east and west side of Norfolk St. on Central Ave.	-----	-----	-----	-----	-----	22	-----	2	----
"	Valley St. from 560 feet east of Stuyvesant Ave. to West End. Ave., and on West End Ave. from Valley St. north to dead end, Vailsburgh	-----	-----	-----	-----	2,222	-----	-----	3	1
"	Chadwick Ave. from Hawthorne Ave. to dead end north of Runyon St. and connecting Runyon St. to Chadwick Ave.	-----	-----	-----	-----	-----	885	-----	3	1
March	Alpine St. from Frelinghuysen Ave. to Sherman Ave.	-----	-----	-----	-----	-----	490	-----	2	----
"	Cabinet St. from Hunterdon St. to Morris Ave.	-----	-----	-----	-----	-----	208	-----	1	----
"	Grant Ave. from Hunterdon St. east	-----	-----	-----	-----	-----	156	-----	----	----
"	Hunterdon St. from dead end south of Runyon St. south to Hawthorne Ave.	-----	-----	-----	-----	-----	373	-----	1	----
"	Division St. from Spring St. to west curb of Ogden St.	-----	-----	-----	-----	-----	259	-----	1	1
"	Summit Pl. from Summit St. to Hoyt St.	-----	-----	-----	-----	-----	459	-----	----	----
"	Bigelow St. from Hillside Ave. to Belmont Ave. and from Badger Ave. to Peshine Ave.	-----	-----	-----	-----	-----	979	-----	4	----
"	Hawthorne Ave. from west curb of Elizabeth Ave. to east curb of Johnson Ave.	-----	-----	-----	-----	-----	268	-----	1	----
"	Connecting the Low and High pressure mains in front of New City Hall	-----	-----	39	-----	-----	-----	-----	2	----
"	Montgomery Ave. from dead end south of Avon Ave. south	-----	-----	-----	-----	-----	60	-----	----	----
	Renner Ave. from dead end to dead end east of Hunterdon St.	-----	-----	-----	-----	-----	276	-----	----	----
April	Elizabeth Ave. from Lyons Ave. to 234 feet south of Weequahic Ave.	-----	-----	-----	-----	-----	441	-----	2	2
	Carried forward	-----	1,864	365	-----	2,343	8,049	2,996	63	16

STATEMENT OF PIPE LAID IN 1906.

Month, 1906.	LOCATION OF PIPE.	Length in Lineal Feet. 20 in.	16 in.	12 in.	10 in.	8 in.	6 in.	4 in.	Stops.	Hydrants.
	Brought forward	-----	1,864	365	-----	2,343	8,049	2,996	63	16
April	Lyons Ave. from Elizabeth Ave. west	-----	-----	-----	-----	-----	37	-----	1	----
"	Weequahic Ave. from Elizabeth Ave. west	-----	-----	-----	-----	-----	37	-----	1	----
"	Avon Ave. from South 17th St. to South 18th St.	-----	-----	-----	256	-----	-----	-----	1	----
"	Hawthorne Ave. across Elizabeth Ave.	-----	-----	-----	-----	-----	77	-----	----	----
"	Ridge St. from Ballantine Parkway north	-----	-----	-----	-----	-----	287	-----	1	----
"	Ballantine Parkway across Ridge St.	-----	-----	-----	-----	-----	36	-----	----	----
"	Mapes Ave. from Shephard Ave. to Mapes Pl.	-----	-----	-----	-----	-----	343	-----	1	2
May	Avon Ave. crossing South 14th St.	-----	-----	-----	78	-----	-----	-----	----	----
"	Ridge St. from Elwood Ave. south	-----	-----	-----	-----	-----	339	-----	----	1
"	Scheerer Ave. from dead end east of Bergen St. west	-----	-----	-----	-----	-----	431	-----	2	2
"	North 4th St. from 1st Ave. north	-----	-----	-----	-----	-----	352	-----	1	1
"	Madison Ave. crossing South 14th St.	-----	-----	-----	-----	-----	79	-----	2	----
"	Central Ave. from High St. to Summit St.	-----	-----	-----	-----	-----	400	-----	2	----
"	Lehigh Ave. from Elizabeth Ave. to Hunterdon St.	-----	-----	-----	-----	-----	1,017	-----	1	2
"	Lackawanna Ave. from Nesbitt St. to Clifton Ave.	-----	-----	-----	-----	-----	-----	285	2	----
"	Clifton Ave. from Lackawanna Ave. south	-----	-----	-----	-----	-----	90	-----	----	----
"	Branford Pl. from Broad St. to Nutria St.	-----	-----	-----	-----	-----	170	-----	1	1
"	Nutria St. from Branford Pl. north	-----	-----	-----	-----	-----	-----	37	1	----
"	Hunterdon St. from Lehigh Ave. south	-----	-----	-----	-----	-----	362	-----	2	1
"	Renner Ave. from Seymour Ave. west	-----	-----	-----	-----	-----	97	-----	1	----
"	Hecker St. across Sussex Ave.	-----	-----	-----	-----	-----	49	-----	1	----
"	Jay St. across Sussex Ave.	-----	-----	-----	-----	-----	64	-----	1	----
"	Duryea St. across Sussex Ave.	-----	-----	-----	-----	-----	49	-----	1	----
"	St. James Pl. from Clinton Pl. west to Aldine St.	-----	-----	-----	-----	-----	331	-----	1	1
"	Ingraham Pl. from Millington Ave. to Runyon St.	-----	-----	330	-----	-----	16	-----	1	----
"	Jelliff Ave. from Watson Ave. south to dead end	-----	-----	-----	-----	-----	343	-----	1	1
"	Murray St. from Mulberry St. east	-----	-----	-----	-----	-----	195	-----	1	1
"	Ridge St. from Grafton Ave. north to dead end	-----	-----	-----	-----	-----	360	-----	----	----
June	Avon Ave. from Montgomery Ave. west	-----	-----	-----	84	-----	-----	-----	----	----
"	South 18th St. from dead end north of Madison Ave. south	-----	-----	-----	-----	-----	377	-----	2	----
	Carried forward	-----	1,864	695	418	2,343	13,986	3,318	92	29

STATEMENT OF PIPE LAID IN 1906.

Month, 1906.	LOCATION OF PIPE.	Length in Lineal Feet. 20 in.	16 in.	12 in.	10 in.	8 in.	6 in.	4 in.	Stops.	Hydrants
	Brought forward	----	1,864	695	418	2,343	13,986	3,318	92	29
June	Woodside Ave. from Grafton Ave. to Heller Parkway	----	----	----	----	----	776	----	2	1
"	Marie Pl. from Belmont Ave. to Badger Ave.	----	----	----	----	----	575	----	2	1
"	Central Ave. from Hudson St. to Jay St.	----	----	----	----	----	266	----	1	1
"	Central Ave. from Summit St. to Norfolk St.	----	----	1,826	----	----	----	----	4	3
"	Cross connection Summit St. and Central Ave.	----	----	----	----	----	15	----	1	----
"	Cross connection Colden St. and Central Ave.	----	----	----	----	----	41	----	2	1
"	Cross connection Hoyt St. and Central Ave.	----	----	----	----	----	31	----	1	----
"	Cross connection Lock St. and Central Ave.	----	----	----	----	----	49	----	2	1
"	Cross connection Dey St. and Central Ave.	----	----	----	----	----	16	----	1	----
"	Cross connection Newark St. and Central Ave.	----	----	----	----	----	34	----	2	----
"	Cross connection Treacy Ave. and Avon Ave.	----	----	----	----	----	28	----	1	----
"	Avon Ave. from Treacy Ave. to Shanley Ave.	----	----	----	500	----	----	----	2	1
"	Cross connection Baldwin Ave. and Avon Ave.	----	----	----	----	----	00	----	----	----
"	Avon Ave. from South 15th St. to South 16th St.	----	----	----	267	----	----	----	----	----
"	Chadwick Ave. from dead end north of Avon Ave. north to Rose St	----	----	----	----	----	24	----	----	----
"	Cross connection Dey St. and Central Ave.	----	----	----	----	----	30	----	----	----
"	Cross connection Newark St. and Central Ave.	----	----	----	----	----	14	----	----	----
"	Cross connection Lock St. and Central Ave.	----	----	----	----	----	64	----	1	----
July	Central Ave., south side, from 1st St. to 4th St.	----	----	----	----	----	807	----	5	1
"	Central Ave., south side, from South 6th St. to South 9th St., and connecting South 6th St., South 7th St. and South 8th St.	----	----	----	----	----	----	800	5	2
"	Stengel Ave. from Elizabeth Ave. west	----	----	----	----	----	189	----	1	1
"	Florence Pl. from Sanford Ave. to Geneva St., Vailsburgh	----	----	----	----	----	293	----	1	1
"	Geneva St. from Florence Pl. north to dead end, Vailsburgh	----	----	----	----	----	127	----	----	----
"	Bergen St. from dead end south of Custer Ave. to Renner Ave.	----	----	----	----	----	192	----	----	----
"	Demarest St. from dead end south of Nye Ave. north	----	----	----	----	----	371	----	2	2
"	Central Ave., north side, from South 9th St. to South 10th St.	----	----	----	----	----	291	----	----	----
"	Central Ave., north side, from South 11th St. to South 12th St.	----	----	----	----	----	266	----	2	----
"	Central Ave., south side, from South 10th St. to South 11th St.	----	----	----	----	----	284	----	2	1
	Carried forward	----	1,864	2,521	1,245	2,343	18,829	4,118	132	46

STATEMENT OF PIPE LAID IN 1906.

Month, 1906.	LOCATION OF PIPE.	LENGTH IN LINEAL FEET. 20 in.	16 in.	12 in.	10 in.	8 in.	6 in.	4 in	STOPS.	HYDRANTS
	Brought forward	-----	1,864	2,521	1,245	2,343	18,829	4,118	132	46
July	4th St. across Central Ave.	-----	-----	-----	-----	-----	38	-----	----	----
"	Central Ave., south side, from South 11th St. to South 12th St.	-----	-----	-----	-----	-----	287	-----	2	1
"	Central Ave. from dead end east of 15th St. west to City Line	-----	-----	-----	-----	-----	485	-----	1	2
"	South 15th St. from Central Ave. north	-----	-----	-----	-----	-----	31	-----	----	1
"	South 16th St. from Central Ave. north	-----	-----	-----	-----	-----	31	-----	----	1
"	Walnut St. at Pennsylvania Railroad for pressure regulator	-----	-----	24	-----	-----	-----	-----	2	----
Aug.	15th Ave. from South 16th St. to South 17th St.	-----	-----	-----	-----	-----	311	-----	2	----
"	Madison Ave. crossing So th 17th St.	-----	-----	-----	-----	-----	68	-----	----	----
"	Lawrence St from South Canal S soutl	-----	-----	-----	-----	13	-----	-----	1	----
"	Peddie St from dead end east of Frel nghuysen Ave. east	-----	-----	-----	-----	432	-----	-----	----	1
"	South 20th St from dea end sou h of 16th Ave. south	-----	-----	-----	-----	-----	149	-----	----	----
"	11th Ave. from South 9th St. o South 20th St	-----	-----	-----	-----	-----	259	-----	1	1
"	South 18th St from sout side of Alpine St. north	-----	-----	-----	-----	-----	256	-----	1	----
"	Vernon Ave. from dead nd east of Clinton Pl. east	-----	-----	-----	-----	-----	36	-----	----	----
"	Chadwick Ave. from dead end south of Clinton Ave. south to Bigelow St.	-----	-----	-----	-----	-----	328	-----	1	----
"	Weequahic Ave. from Elizabeth Ave west	-----	-----	-----	-----	-----	1,054	-----	1	2
"	Central Ave. from 4th S . to Warren St.	-----	-----	-----	-----	-----	327	-----	3	----
"	Cliff St. from Oakland Ter. to Dover St., Vailsburgh	-----	-----	-----	-----	-----	472	-----	1	2
Sept.	West Rose St. from Chadwick Ave. west	-----	-----	-----	-----	-----	739	-----	1	1
"	Vanderpool S from east side of Broad St. to Ave. B; Ave. B from Vanderpool St. to Wright St Wright St. from Ave. B east about 225 feet	-----	2,331	-----	-----	-----	-----	-----	1	4
"	New Jersey Railroad Ave., east nd west side, crossing Vanderpool St., connecting Ave. A and Vanderpool St M ler St. crossing Ave. B	-----	-----	-----	-----	-----	281	-----	9	2
"	Vanderpool St. from Ave. B east	-----	-----	-----	350	-----	-----	-----	2	----
"	Vanderpool St he Pennsy vania Railroad for pressure Regulator	-----	-----	24	-----	-----	-----	-----	2	----
"	South 17th St. from dead end south of 17th Ave. south to 18th Ave.	-----	-----	-----	559	-----	-----	-----	1	1
	Carried forward	-----	4,195	2,569	2,154	2,788	23,981	4,118	164	65

STATEMENT OF PIPE LAID IN 1906.

Month, 1906.	LOCATION OF PIPE.	LENGTH IN LINEAL FEET. 20 in.	16 in.	12 in.	10 in.	8 in.	6 in.	4 in.	STOPS.	HYDRANTS
	Brought forward	-----	4,195	2,569	2,154	2,788	23,981	4,118	164	65
Sept.	Bigelow St. from Peshine Ave. to Bergen St.	-----	-----	-----	-----	-----	530	-----	2	----
"	Weequahic Pl. from Weequahic Ave. south	-----	-----	-----	-----	-----	225	-----	1	1
"	Lyons Ave. from Elizabeth Ave. west	-----	-----	-----	-----	-----	219	-----	----	1
"	Connecting 20 in. to 20 in. on Central Ave. and Warren St.	110	-----	-----	-----	-----	-----	-----	3	----
"	Cross connection at 4th St. and Central Ave.	-----	-----	-----	-----	-----	20	-----	1	----
"	Stanton St. from dead end east of Elizabeth Ave. east to Sherman Avenue	-----	-----	-----	-----	-----	193	-----	1	----
Oct.	High St. from Bank St. to Breintnall Pl.	-----	-----	-----	-----	-----	379	-----	2	----
"	Jelliff Ave. from dead end south of Bigelow St. to the north curb of Runyon St.	-----	-----	-----	-----	-----	376	-----	1	1
"	Chester Ave. from North 11th St. west	-----	-----	-----	-----	-----	88	-----	1	----
"	North 11th St. from Chester Ave. north	-----	-----	-----	-----	-----	395	-----	1	1
"	North 14th St. from Orange St. to Seventh Ave.	-----	-----	-----	-----	-----	516	-----	2	1
Nov.	Branford St. from dead end west of Frelinghuysen Ave. west	-----	-----	-----	-----	-----	48	-----	----	----
"	Peshine Ave. from dead end south of Watson Ave. south	-----	-----	-----	-----	-----	108	-----	----	----
"	Division St. connecting with Ogden St.	-----	-----	-----	-----	-----	39	-----	----	----
"	Hunter St. from dead end west of Sherman Ave. west to Elizabeth Avenue	-----	-----	-----	-----	-----	303	-----	----	----
"	Whitney St. from South Orange Ave. to Dassing St. Vailsburgh	-----	-----	-----	-----	-----	665	-----	2	1
"	Lanark Ave. from dead end west of Sanford Ave. west Vailsburgh	-----	-----	-----	-----	-----	-----	84	----	----
"	Abbottsford Ave. from dead end west of Derby St. west to east curb line of Vail St., Vailsburg	-----	-----	-----	-----	-----	-----	24	----	----
"	Ridge St. from Berkley Ave. north	-----	-----	-----	-----	-----	268	-----	1	1
"	North 5th St. from dead end south of Berkley Ave. south	-----	-----	-----	-----	-----	96	-----	----	----
"	Meeker Ave. from Frelinghuysen Ave. west to east side of Brook, and from the west side of Brook west to Elizabeth Ave.	-----	-----	-----	-----	-----	2,184	-----	2	2
"	Chestnut St. from dead end east of Tyler St. east	-----	-----	-----	-----	-----	96	-----	----	----
"	Chadwick Ave. from Bigelow St. south to dead end	-----	-----	-----	-----	-----	448	-----	1	----
"	Cortland Pl. from Ferry St. to Horatio St.	-----	-----	-----	-----	-----	740	-----	2	----
	Carried forward	110	4,195	2,569	2,154	2,788	31,917	4,226	187	74

STATEMENT OF PIPE LAID IN 1906.

Month, 1906.	LOCATION OF PIPE.	LENGTH IN LINEAL FEET. 20 in.	16 in.	12 in.	10 in.	8 in.	6 in.	4 in.	STOPS.	HYDRANTS.
	Brought forward	110	4,195	2,569	2,154	2,788	31,917	4,226	187	74
Nov.	Orange St. from North 14th St. to City Line	-----	-----	-----	-----	-----	93	-----	-----	1
"	Avon Ave. from South 11th St. to South 13th St.	-----	-----	-----	532	-----	-----	-----	1	2
"	South 12th St. connecting Avon Ave.	-----	-----	-----	-----	-----	48	-----	-----	-----
"	Chadwick Ave. from West Rose St. north	-----	-----	-----	-----	-----	108	-----	-----	-----
"	South 11th St. from Avon Ave. south to dead end	-----	-----	-----	-----	-----	301	-----	1	-----
Dec.	South 18th St. between Alpine St. and Madison Ave. connecting both dead ends	-----	-----	-----	-----	-----	252	-----	-----	-----
"	Tyler St. from Oliver St. to Chestnut St.	-----	-----	-----	-----	-----	421	-----	1	-----
	Totals	110	4,195	2,569	2,686	2,788	33,140	4,226	190	77

During the year 49,714 lineal feet have been laid in the City, of which

110 lineal feet of 20-inch diameter
4,195 " " " 16- " "
2,569 " " " 12- " "
2,686 " " " 10- " "
2,788 " " " 8- " "
33,140 " " " 6- " "
4,226 " " " 4- " "
} 49,714 feet.

STATEMENT OF PIPE RELAID IN 1906.

Month, 1906.	LOCATION OF PIPE.	Length in Lineal Feet. 24 in.	20 in.	16 in.	10 in.	6 in.	4 in	Stops.	Hydrants.
February	Clifton Ave. across D., L. & W. R. R.	216	-----	-----	-----	-----	-----	-----	-----
March	Second St. across D., L. & W. R. R.—wrought iron pipe	-----	-----	-----	-----	98	-----	-----	-----
"	Eighth Ave. across D., L. & W. R. R.	-----	179	-----	-----	-----	-----	1	-----
"	Eighth Ave. across D., L. & W. R. R.—wrought iron pipe	-----	-----	-----	-----	90	-----	-----	-----
"	First St. across D., L. & W. R. R.—wrought iron pipe	-----	-----	-----	-----	113	-----	1	-----
April	William St. from Arlington St. to Shipman St.	-----	-----	-----	-----	205	-----	1	-----
"	Nicholson St. from William St. north	-----	-----	-----	-----	28	-----	1	-----
May	Sussex Ave. from Summit St. to Colden St.	-----	-----	-----	-----	303	-----	3	-----
"	Orange St. across Morris Canal	-----	-----	88	-----	-----	-----	-----	-----
June	Avon Ave. from Farley Ave. to Treacy Ave.	-----	-----	-----	318	-----	-----	-----	-----
"	Central Ave., north side, from Hoyt St. to Newark St.	-----	-----	-----	-----	1,005	-----	3	-----
July	Geneva St. from Helen Pl. south—Vailsburgh	-----	-----	-----	-----	135	-----	1	-----
"	Richelieu Ter. from Noll Pl. to Cliff St.—Vailsburgh	-----	-----	-----	-----	259	-----	1	-----
August	Cliff St. from Richelieu Ter. to Oakland Ter.—Vailsburgh	-----	-----	-----	-----	325	-----	1	-----
"	S. Canal St. from Mulberry St. east	-----	-----	-----	-----	558	-----	3	-----
"	Murray St. at Austin St.	-----	-----	-----	-----	72	-----	1	-----
September	Vanderpool St. east of Ave. B, east	-----	-----	-----	209	-----	-----	-----	-----
"	Tyler St. between South St. and Clifford St.	-----	-----	-----	-----	72	-----	-----	-----
"	Cottage St. from Mulberry St. to New Jersey Railroad Ave.	-----	-----	-----	-----	529	-----	1	-----
"	New York Ave. from New Jersey Railroad Ave. east	-----	-----	-----	-----	411	-----	-----	-----
October	Camfield Ct. from Washington St. east—wrought iron pipe	-----	-----	-----	-----	-----	99	-----	-----
November	Eighth Ave. from Broad St. to Factory St.	2,118	-----	-----	-----	-----	-----	-----	-----
"	Sheffield St. crossing Eighth Ave.	-----	-----	-----	-----	93	-----	3	-----
"	Summer Ave. connecting Eighth Ave.	-----	-----	-----	-----	8	-----	-----	-----
"	High St. connecting Eighth Ave., south side	-----	-----	-----	43	-----	-----	2	-----
"	High St. connecting Eighth Ave., north side	-----	-----	-----	27	-----	-----	1	-----
	Totals	2,334	179	88	597	4,394	99	24	-----

During the year 7,691 lineal feet have been relaid in the City of which

2,334 lineal feet of 24-inch diameter
179 " " " 20- " "
88 " " " 16- " "
597 " " " 10- " "
4,394 " " " 6- " "
99 " " " 4- " "
} 7,691 feet.

STATEMENT OF PIPE LOWERED IN 1906.

Month, 1906.	LOCATION OF PIPE.	LENGTH IN LINEAL FEET			STOPS.	HYDRANTS.
		12 in.	6 in.	4 in.		
March	Barbara St. from Hamburg Pl. to Niagara St.	-----	710	-----	-----	-----
April	Beach St. from Mulberry St. to Orchard St.	-----	-----	400	-----	-----
May	Adams St. from Downing St. to Ferry St.	413	-----	-----	-----	-----
"	Adams St. from Ferry St. to Lafayette St.	575	-----	-----	-----	-----
"	Adams St. from Lafayette St. to Elm St.	212	-----	-----	-----	-----
"	Adams St. from Elm St. to Walnut St.	200	-----	-----	-----	-----
"	South 14th St. between Madison Ave. and Avon Ave.	-----	100	-----	-----	-----
"	Sussex Ave. from Colden St. to Newark St.	-----	1,275	-----	-----	-----
"	Sussex Ave. from Hudson St. to Hecker St.	-----	200	-----	-----	-----
"	Sussex Ave. from Morris Canal west	-----	175	-----	-----	-----
June	Carteret St. from Washington Ave. to about 115 ft. west of Lincoln Ave	-----	530	-----	-----	-----
July	Central Ave., north side, from Summit St. to Colden St.	-----	250	-----	-----	-----
August	Hedden St. from south curb of Runyon St. north	-----	170	-----	-----	-----
"	Runyon St. from Hedden St. west	-----	50	-----	-----	-----
September	Halsted St. from 175 feet north of South Orange Ave. north 400 feet—Vailsburgh	-----	-----	400	-----	-----
"	Abbottsford Ave. from dead end east of Vail St. east—Vailsburgh	-----	-----	300	-----	-----
"	New York Ave. from McWhorter St. west	-----	220	-----	-----	-----
October	Jelliff Ave. from Clinton Ave. north	-----	952	-----	-----	-----
November	Jelliff Ave. from Runyon St. north	-----	450	-----	-----	-----
	Totals	1,400	5,082	1,100	-----	-----

During the year 7,582 lineal feet have been lowered in the City of which

1,400 lineal feet of 12-inch diameter
5,082 " " " 6- " "
1,100 " " " 4- " "
} 7,582 feet.

PIPES LAID, RELAID AND LOWERED—YEAR ENDED DECEMBER 31st, 1906.

	LENGTH IN LINEAL FEET.								TOTALS.	STOPS.	HYDRANTS.
	24 in.	20 in.	16 in.	12 in.	10 in.	8 in.	6 in.	4 in			
Pipe LAID (extensions)	-----	110	4,195	2,569	2,686	2,788	33,140	4,226	49,714	190	77
Pipe RELAID (substitution of large for small pipes and replacing old horizontal cast pipe)	2,334	179	88	-----	597	-----	4,394	99	7,691	24	2
Pipe LOWERED	-----	-----	-----	1,400	-----	-----	5,082	1,100	7,582	----	----
MISCELLANEOUS—Valves on hydrants in substitution for old broken valves and replaced hydrants	-----	----	-----	-----	-----	-----	-----	-----	-----	65	69
Total	2,334	289	4,283	3,969	3,283	2,788	42,616	5,425	64,987	279	148

Total pipe laid, relaid and lowered during the year equals 64,987 lineal feet, equals 12 $\frac{1887}{5280}$ miles.

Total mileage of pipe connected with the works at the end of the year equals 340.$\frac{4208}{5280}$ miles.

STATEMENT OF SERVICES FOR YEAR ENDED DECEMBER 31, 1906.

⅝-inch Services. Month.	No. of New Services.	No. of Services Renewed.	No. of Taps Only.	No. of Stops and Boxes.	No. of New Water Takers.	No. of Feet of Pipe.	Charges.
January	55	4	1	----	55	1,707.5	$814.00
February	40	4	1	----	40	757.0	604.00
March	80	4	----	----	80	1,175.0	1,160.00
April	95	6	----	----	95	1,728.0	1,390.00
May	120	12	----	----	120	2,310.5	1,800.00
June	157	3	1	----	157	4,662.0	2,232.00
July	105	2	2	----	105	3,869.5	1,498.00
August	180	4	1	----	180	2,858.0	2,564.00
September	188	11	----	----	188	1,963.0	2,742.00
October	106	4	----	2	106	2,661.5	1,530.00
November	147	2	3	----	147	1,632.5	2,090.00
December	109	2	----	1	109	1,138.0	1,549.00
Total	1,382	58	9	3	1,382	26,462.5	$19,973.00

STATEMENT OF SERVICES FOR YEAR ENDED DECEMBER 31, 1906.

1-inch Services. Month.	No. of New Services.	No. of Services Renewed.	No. of Taps Only.	No. of Stops and Boxes.	No. of New Water Takers.	No. of Feet of Pipe.	Charges.
January	8	1	----	----	8	440.5	$175.00
February	6	----	----	----	6	57.0	120.00
March	4	----	----	----	4	60.5	80.00
April	15	----	----	----	15	344.0	300.00
May	13	1	----	----	13	196.0	275.00
June	18	----	----	----	18	260.0	360.00
July	19	----	----	----	19	438.5	380.00
August	15	----	----	----	15	148.0	300.00
September	13	----	----	----	13	274.5	260.00
October	19	----	----	----	19	464.0	380.00
November	17	----	----	----	17	341.0	340.00
December	10	----	----	----	10	280.0	200.00
Total	157	2	----	----	157	3,304.0	$3,170.00

RECAPITULATION, 1906.

SIZE.	No. of New Services.	No. of Services Renewed.	No. of Taps Only.	No. of Stops and Boxes.	No. of New Water Takers.	No. of Feet of Pipe.	Charges.
⅝ Inch	1,382	58	9	3	1,382	26,462.5	$19,973.00
1 Inch	157	2	----	----	157	3,304.0	3,170.00
Total	1,539	60	9	3	1,539	29,766.5	**$23,143.00**

METERS SET BY CONSUMERS, 1906.

Month, 1906.	Trident Meters.								Thomson Meters.								Nash.			Crown.	Worthington.		Hersey.	Columbia.	Total.
									Lambert.					Bee.											
	⅝"	¾"	1"	1½"	2"	3"	4"	6"	⅝"	¾"	1"	1½"	2"	⅝"	1"	2"	⅝"	¾"	1"	⅝"	⅝"	1"	⅝"	⅝"	
January	45		2		1	1	1		23		1		1				1								76
February	47		2		1				71		5						1						1	1	129
March	68		7		1	1	1		33		2								1						114
April	51		5		1				24	1															82
May	98	1	9	1	4		1		69	1										1					185
June	59		6		3				37		1			1							1				108
July	58		7	1	5	1			12																84
August	65		11		6				25					2											109
September	67		5		2				24																98
October	86		17	1	2			1	1											1					109
November	104		10		1				1		5	1				1									123
December	77			1	3				2		10						1	1							95
Total	825	1	81	4	30	3	3	1	322	2	24	1	1	3		1	3	1	1	2	1		1	1	1,312

Number of meters in use January 1st, 1906 17,098
Total number of meters set during 1906 1,312

Total number of meters in use January 1st, 1907 18,410

SPECIAL SERVICE CONNECTIONS.

FROM JAN. 1, 1906, TO DEC. 31, 1906.

Month.	1½"	2"	3"	4"	6"		Total.
January	1	3	1	1	------	------	6
February	1	------	1	------	------	------	2
March	------	4	------	------	------	------	4
April	------	4	------	1	------	------	5
May	1	2	------	------	------	------	3
June	------	2	------	------	2	------	4
July	------	5	------	1	------	------	6
August	------	7	------	2	3	------	12
September	------	3	------	------	------	------	3
October	------	7	------	------	1	------	8
November	------	14	1	1	1	------	17
December	------	5	------	------	3	------	8
Total	3	56	3	6	10	------	78

HYDRANT STATEMENT.

FOR THE YEAR ENDED DECEMBER 31, 1906.

LOW SERVICE.

Month.	No.	Location	Dia.	Hyd.	St'ps
Jan.	1	Treat Pl, west side at dead end south of Brandford Pl.	6"	1	1
Feb.	2	N. E. Cor. Frelinghuysen Ave. and Earl St.	6"	1	1
	3	S E Cor. Frelinghuysen Ave and Hunter St.	6"	1	1
	4	N. E. Cor. Frelinghuysen Ave and Bigelow St.	6"	1	1
	5	S. E. Cor. Frelinghuysen Ave. and Clifton St.	6"	1	1
	6	S. E. Cor. Frelinghuysen Ave. and Brandford St.	6"	1	1
	7	N. E. Cor. Frelinghuysen Ave. and Concord St.	6"	1	1
	8	N. E. Cor. Frelinghuysen Ave. and Maple St.	6"	1	1
	9	S. E. Cor. Frelinghuysen Ave. and Willow St.	6"	1	1
	10	N. W. Cor. Frelinghuysen Ave. and Empire St.	6"	1	1
	11	N. W. Cor. Frelinghuysen Ave. and Victoria St.	6"	1	1
	12	N. W. Cor. Frelinghuysen Ave. and Meeker Ave.	6"	1	1
	13	Frelinghuysen Ave., west side, north of Weston Ave.	6"	1	1
March	14	S. W. Cor. Hermon and Vesey Sts.	6"	1	-
	15	N. W. Cor. Division and Ogden Sts.	6"	1	1
	16	Adams St west side, middle of block between Market and Downing Sts.	6"	1	1
May	17	Brandford Pl., south side, bet. Broad St. and Treat Pl.	6"	1	1
	18	Murray St., north side, east of Mulberry St., at dead end.	6"	1	1
June	19	Woodside Ave., west side, middle of block, between Grafton Ave. and Heller Parkway	4"	1	1

Month.	No.		Dia.	Hyd.	St'ps
Aug.	20	S. W. Cor. South Canal and Lawrence Sts.	6"	1	1
	21	Peddie St., south side, east of Pennsylvania Ave.	6"	1	1
Sept.	22	Wright St., south side at dead end, east of Ave. B	6"	1	1
	23	N. W. Cor. Ave. B and Vanderpool St.	6"	1	1
	24	N. E. Cor. Miller St. and Ave. B	6"	1	1
	25	S. E. Cor. Vanderpool St. and Avenue A	6"	1	1
	26	S. E. Cor. Vanderpool St. and N. J. Railroad Ave.	6"	1	1
	27	N. W. Cor. N. J. Railroad Ave. and Vanderpool St.	6"	1	1
Nov.	28	N. E. Cor. Hunter St. and Elizabeth Ave.	6"	1	1
	29	Meeker Ave., west side, 750 ft. east of Elizabeth Ave.	4"	1	1
	30	Meeker Ave., north side, 650 ft. west of Frelinghuysen Ave.	4"	1	1

HIGH SERVICE.

Jan.	31	N. W. Cor. S. 11th St. and Clinton Ave.	6"	1	1
	32	S. W. Cor. S. 12th St. and Madison Ave	6"	1	1
	33	S. W. Cor. S. 12th St. and Avon Ave.	6"	1	1
	34	S. 12th St., west side, middle of block, between Avon and Madison Aves.	4"	1	1
	35	S. 12th St., west side, middle of block, between Clinton and Madison Aves.	4"	1	1
	36	Vernon Ave, north side, east of Clinton Pl., at dead end	6"	1	1
			6"	1	1
	37	N. E. Cor. 15th Ave. and South 16th St.	6"	1	1
Feb.	38	S. W. Cor. Shanley and Madison Aves	6"	1	1
	39	S. W. Cor. Chadwick Ave, and W. Rose St.	6"	1	1
	40	N. E. Cor. Chester Ave. and N. 11th St.	6"	1	1
	41	N. W. Cor. West End Ave and Valley St. (Vailsburg)	6"	1	1
March	42	Chadwick Ave., west side, middle of block, bet. Runyon and Bigelow Sts.	6"	1	1
	43	N. E. Cor. Colden St. and Summit Pl.	4"	1	1
	44	S. E. Cor. Hawthorne and Johnson Aves.	6"	1	1
Apr.	45	N. W. Cor. William and Nicholson Sts.	6"	1	1
	46	Elizabeth Ave. west side dead end, south of Weequahic Ave.	6"	1	1

Month.	No.		Dia.	Hyd.	St'ps
Apr.	47	N. W. Cor. Elizabeth and Weequahic Aves.	6"	1	1
	48	Ridge St. west side at dead end north of Ballantine Parkway	6"	1	1
	49	N. W. Cor. Mapes Ave. and Shephard Ave.	6"	1	1
	50	N. E. Cor. Mapes Ave. and Mapes Pl.	6"	1	1
May	51	Ridge St. west side, middle of block bet. Elwood and Delavan Aves.	6"	1	1
	52	Scheerer Ave. west side about 250 feet west of Bergen St.	6"	1	1
	53	N. W. Cor. Scheerer Ave. and Bergen St.	6"	1	1
	54	West side N. 14th St. middle of block between First Ave. and Abington Ave.	6"	1	1
	55	Lehigh Ave. north side, middle of block bet. Elizabeth Ave. and Hunterdon St.	6"	1	1
	56	N. E. Cor. Lehigh Ave. and Hunterdon St.	6"	1	1
	57	S. E. Cor. Clifton and Lackawanna Aves.	4"	1	1
	58	Hunterdon St. west side opposite Stengel Ave.	6"	1	1
	59	St. James Pl. north side opp. Aldine St.	4"	1	1
	60	Jelliff Ave. west side south of Watson Ave. at dead end	4"	1	1
	61	N. W. Cor. Marie Pl. and Belmont Ave.	4"	1	1
	62	N. W. Cor. Hudson St. and Central Ave.	6"	1	1
	63	S. W. Cor. Central Ave. and Summit St.	6"	1	1
	64	S. W. Cor. Colden St. and Central Ave.	6"	1	1
	65	S. W. Cor. Lock St. and Central Ave.	6"	1	1
	66	Central Ave., south side, opp. Dey St.	6"	1	1
June	67	S. E. Cor. Central Ave. and Newark St.	6"	1	1
	68	Avon Ave. north side, opposite Shanley Ave.	4"	1	1

Month.	No.		Dia.	Hyd.	St'ps
June	69	Sandford Ave. west side, at Irvington and Vailsburg Line (abt. 400 ft. south of Fleetwood Ave.)	4"	1	1
July	70	S. E. Cor. Central Ave. and 4th St.	6"	1	1
	71	S. E. Cor. Central Ave. and South 7th St.	4"	1	1
	72	S. E. Cor. Central Ave. and South 8th St.	4"	1	1
	73	N. W. Cor. Stengel Ave. and Elizabeth Ave.	4"	1	1
	74	N. E. Cor. Florence Pl. and Geneva St. (Vailsburg)	4"	1	1
	75	S. W. Cor. Demarest St. and Nye Ave.	4"	1	1
	76	Demarest St., west side, middle of block, bet. Nye and Hawthorne Aves.	4"	1	1
	77	N. W. Cor. Central Ave. and South 15th St.	6"	1	1
	78	Central Ave. north side at City Line.	4"	1	1
	79	S. W. Cor. Central Ave. and South 10th St.	6"	1	1
	80	S. W. Cor. Central Ave. and South 11th St.	6"	1	1
Aug.	81	N. E. Cor. Cliff St. and St. Paul Ave. (Vailsburg)	4"	1	1
	82	N. E. Cor. Cliff and Dover Sts. (Vailsburg)	4"	1	1
	83	N. W. Cor Cliff St. and Richelieu Terrace (Vailsburg)	4"	1	1
	84	S. 17th St. west side, middle of block bet. Madison and Avon Aves.	6"	1	1
	85	S. E. Cor. 11th Ave. and South 20th St.	4"	1	1
	86	N. W. Cor. Chadwick Ave. and Bigelow St.	6"	1	1
	87	Weequahic Ave. north side, west of Weequahic Pl.	6"	1	1
	88	Weequahic Ave. north side, west of Weequahic Pl. at dead end	6"	1	1
Sept.	89	West Rose St. west side, middle of block, bet. Chadwick and Tracey Aves.	6"	1	1
	90	S. 17th St. west side, middle of block between 17th and 18th Aves.	6"	1	1

Month.	No.		Dia.	Hyd.	St'ps
Sept.	91	Weequahic Pl. west side, at dead end south of Weequahic Ave.	6"	1	1
	92	Lyons Ave. north side, at dead end, middle of block bet. Elizabeth Ave. and Porter Pl.	4"	1	1
Oct.	93	Lenox St. north side, at dead end, east of Sandford Ave. (Vailsburg)	4"	1	1
	94	N. W. Cor. Littleton and 16th Aves.	6"	1	1
	95	Jelliff Ave. west side, middle of block bet. Madison and Avon Aves.	6"	1	1
	96	N. W. Cor. Jelliff Ave. and Clinton Ave.	6"	1	1
	97	N. W. Cor. Jelliff Ave. and Runyon St.	6"	1	1
	98	N. 11th St. west side, at dead end north of Chester Ave.	4"	1	1
	99	N. E. Cor. N. 14th St. and Hedden Pl.	6"	1	1
Nov.	100	Whitney St. west side, middle of block bet. South Orange Ave. and Dassing St. (Vailsburg)	6"	1	1
	101	Ridge St. west side, middle of block bet. Berkley Ave. and Ballantine Parkway	6"	1	1
	102	Orange St. south side, west of N. 14th St. at City Line	6"	1	1
	103	N. W. Cor. S. 11th St. and Avon Ave.	6"	1	1
	104	N. E. Cor. S 13th St and Avon Ave.	6"	1	1

HYDRANTS REPLACED DURING THE YEAR 1906.

LOW SERVICE.

Month.	No.	Location	Dia.	Hyd.	St'ps
Jan.	1	Belleville Av. east side in front of Mt. Pleasant Cemetery	4"	1	1
	2	High St. west side of Orange St.	4"	1	1
	3	S. W. Cor. Lexington and Bowery Sts.	4"	1	1
Feb.	4	Barbara St. west side, middle of block bet. Niagara and Magazine Sts.	4"	1	1
	5	Barbara St., west side, middle of block, bet. Hamburg Pl. and Niagara St.	4"	1	1
Mar.	6	N. W. Cor. Hermon and Johnson Sts.	4"	1	1
Apr.	7	S. W. Cor. Pacific and Garden Sts.	4"	1	1
	8	N. E. Cor. Beach and Orchard Sts.	4"	1	1
	9	S. W. Cor. Lincoln Ave. and Winthrop St.	4"	1	1
May	10	N. W. Cor. Adams and Lafayette Sts.	6"	1	1
	11	Clover St., north side, opp. Merchant St.	4"	1	
	12	N. W. Cor. Frederick and Ferry Sts.	6"	1	1
	13	S. W. Cor. Broad St. and Brandford Pl.	6"	1	1
June	14	N. W. Cor. Spring St. and 8th Ave.	4"	1	1
	15	Mechanic St. south side bet. Broad and Mulberry St.	6"	1	1
	16	N. E. Cor. Emmet St. and Frelinghuysen Ave.	4"	1	1
Aug.	17	S. Canal St., south side, 285 ft. east of Lawrence St.	6"	1	1
	18	N. W. Cor. Broad St. and Washington Pl.	6"	1	1
	19	N. W. Cor. Washington and Bleecker Sts.	4"	1	1
	20	N. W. Cor. Vanderpool St. and Pennsylvania Ave.	4"	1	1
	21	N. W. Cor. Vanderpool and Broad Sts.	4"	1	1
	22	N. W. Cor. Lafayette and Union Sts.	4"	1	1
	23	Vanderpool St. north side, middle of block, bet. Avenue B and Avenue C.	6"	1	1
	24	N. E. Cor. Wright St. and Avenue B.	6"	1	1

Month.	No.		Dia.	Hyd.	St'ps
Aug.	25	Stanton St. north side, middle of block bet. Elizabeth and Sherman Aves.....	4"	1	1
	26	Emmet St. south side, opp. Goble St...	4"	1	1
	27	N. E. Cor. Austin and Murray Sts....	4"	1	1
	28	Ferry St., south side, opp. Richard St....	4"	1	1
	29	S. W. Cor. Bloomfield and Belleville Aves	4"	1	1
Nov.	30	N. W. Cor. Mt. Prospect and Verona Aves.	4"	1	1
	31	N. E. Cor. High St. and 8th Ave. (to replace the one on the S. E. Cor.)...	6"	1	1
	32	N. W. Cor. Sheffield St. and 8th Ave...	6"	1	1
Dec.	33	N. W. Cor. Hamilton and Ward Sts.....	4"	1	1
	34	N. W. Cor. VanBuren and Lafayette Sts.	4"	1	1
	35	N. E. Cor. Prospect and Lafayette Sts.	4"	1	1
	36	S. E. Cor. McWhorter and Lafayette Sts.	4"	1	1
	37	Halsey St. east side, middle of block, bet. Marshall and E. Kinney Sts.....	4"	1	1

HIGH SERVICE.

Jan.	38	N. W. Cor. Spruce and Monmouth Sts.	4"	1	1
	39	S. W. Cor. Tracey and Avon Ave.....	4"	1	1
	40	N. W. Cor. W. Kinney and Howard Sts.	4"	1	1
Feb.	41	N. E. Cor. Bigelow St. and Hillside Ave.	4"	1	1
Apr.	42	19th Ave. west side, 60 ft. west of S. 16th St.	4"	1	1
May	43	Roseville Ave. west side, middle of block, bet. Sussex Ave. and Orange St.	4"	1	1
	44	N. W. Cor. Warren and Humboldt St..	4"	1	1
	45	S. W. Cor. Bergen St. and E. Fairmount Ave	4"	1	
	46	N. W. Cor. Mercer and Howard Sts...	4"	1	1
	47	N. W. Cor. Sussex Ave. and Jay St...	6"	1	1
	48	Sussex Ave. north side, middle of block between Lock and Newark St.....	6"	1	1
	49	N. W. Cor. Sussex Ave. and Hecker St.	6"	1	1
	50	N. W. Cor. Sheffield St. and Sussex Ave.	6"	1	1
	51	S. W. Cor. N. 11th St. and Park Ave..	4"	1	
	52	S. W. Cor. Hoyt St. and Central Ave..	6"	1	1

Month.	No.		Dia.	Hyd.	St'ps
May	53	N. W. Cor. Central Ave. and Dey St...	6"	1	1
	54	N. E. Cor. Central Ave. and Lock St..	6"	1	1
July	55	N. E. Cor. Central Ave. and Norfolk St	4"	1	
	56	S. 20th St. west side, middle of block, between S. Orange Avenue and 13th Ave.	4"	1	
	57	South Orange Ave. south side, middle of block, bet. Munn Ave. and Devine St. (Vailsburg)	6"	1	1
	58	N. W. Cor. Waverly Ave. and High St.	4"	1	
Aug.	59	N. W. Cor. 4th St. and Sussex Ave.....	6"	1	1
	60	S. W. Cor. S. 19th St. and 11th Ave....	4"	1	1
	61	S. 19th St. west side, middle of block, between 11th and 12th Aves.....	4"	1	1
	62	S. W. Cor. S. 19th St. and 12th Ave...	4"	1	
	63	S. 19th St. west side, middle of block, between 12th and 13th Aves.....	4"	1	
	64	N. E. Cor. Abington Ave and Parker St	4"	1	
	65	Newton St. west side, between S. O. Ave. and 14th Ave.....	4"	1	1
	66	N. W. Cor. Hudson St. and Wallace Pl.	4"	1	
	67	Rose St. east side, 150 ft. north of Kipp St.	4"	1	1
	68	N. W. Cor. Parker St. and Montclair Ave.	4"	1	1
	69	N. W. Cor. E. Fairmount Ave. and Highland St.	4"	1	

RECAPITULATION.

New Hydrants set on Low Service.....	30
New Hydrants set on High Service.....	74
New Hydrants replacing old on Low Service.....	37
New Hydrants replacing old on High Service.....	69
	210

The total number of hydrants connected with the works at the end of the year was:

In the city on Low Service.....	1134
In the city on High Service.....	1499
Total in the city.....	2633
Township of Belleville.....	2
Total	2635

SUMMARY OF STATISTICS OF THE NEWARK, N. J., WATER WORKS FOR THE YEAR ENDING DECEMBER 31, 1906

In Form Recommended by the New England Water Works Association.

GENERAL STATISTICS.

Population by census, 1905.....283,000
Date of Construction.....1889-1891
By whom owned.....City of Newark
Source of Supply.....Pequannock River
Mode of Supply.....Gravity

STATISTICS OF CONSUMPTION OF WATER.

Estimated total population at date.....300,000
Estimated population on lines of pipe.....300,000
Estimated population supplied.....300,000
Total consumption for the year.....12,604,600,000 gallons
Passed through meters.....4,567,654,520 gallons
Percentage of consumption metered.....36%
Average daily consumption.....34,533,150 gallons
Gallons per day to each inhabitant.....102
Gallons per day to each consumer.....102
Gallons per day to each tap.....830
Cost of supplying water, per million gallons, figured on total maintenance.....$16.17
Total cost of supplying water, per million gallons figured on total maintenance plus sinking fund, and interest on bonds $69.66

STATISTICS REGARDING DISTRIBUTION SYSTEM.

MAINS.

Kind of pipe.....cast iron and steel
Sizes, from .....4 inch to 60 inch
Extended .....49,714 feet during the year
Discontinued.....125 feet during the year
Total now in use.....340 $\frac{1228}{1320}$ miles.
Cost of repairs per mile.....$13.24
Length of pipe less than 4 inches diameter.....¼ mile
Number of hydrants added during year (public and and private)..... 104
Number of hydrants (public and private) now in use..2,627
Number of stop gates added during year..... 237
Number of stop gates now in use.....4,552
Number of stop gates smaller than 4 inch..... 6
Range of pressure on distributing mains.....25 to 75 lbs
Range of pressure on high pressure system ....90 to 160 lbs

SERVICE.

Kind of pipe.....lead and cast iron
Sizes .....⅝ inch to 6 inch
Extended .....31,015 feet
Total now in use.....156 miles
Number of service taps added during year.....1,617
Number now in use.....41,610
Average length of service.....20 feet
Average cost of service for the year.....$13.89
Number of meters added.....1,312
Number now in use.....18,410
Percentage of services metered.....44%
Percentage of receipts from metered water.....67.8

FINANCIAL STATISTICS.

RECEIPTS.

Balance brought forward from receipts.....		$115,082.33
From water rates—		
Fixture rates.....	$295,385.79	
Meter rates.....	621,269.06	
Total from consumers.....		916,654.85
For hydrants.....	free	
" fountains	free	
" street watering.....	free	
" public buildings.....	free	
" miscellaneous uses.....		
Total from municipal departments.....		
From bond issue.....		
" other sources		112,447.32
Total		$1,144,184.50

EXPENDITURES.

Operation (management and repairs).....		$203,871.61
Interest on bonds.....	$460,255.00	
Payment of bonds.....	50,000.00	
Sinking fund.....	203,900.00	
		714,155.00
Water Works Construction—		
Extension of mains and feeders.	$88,701.57	
" " services	25,233.18	
" " meters	15,022.07	
Total construction.....		$128,956.82

Unclassified expenses—	
Repair meters, handling material, etc.....	6,251.55
Balance	90,949.52
Total	$1,144,184.50

Net cost of works to date (less old plant charged off) and less 2% annual depreciation on distribution.....	$11,070,008.56
Bonded debt at date (including refunded debt)	11,957,000.00
Value of Sinking Fund at date.....	3,039,816.32
Average rate of interest, per cent.....	3.933%

FINANCIAL STATEMENTS

ACCOUNTING DIVISION

Department of Water.

Year Ended December 31st, 1906.

NEWARK, N. J., March 1, 1907.

WILLIAM E. GREATHEAD, ESQ.,

Clerk to the Board of Street and Water Commissioners.

DEAR SIR:—I herewith submit Financial Statements and Trial Balance of the Department of Water, for the year ending December 31st, 1906.

Respectfully yours,

HENRY D. NORTHROP,

Cashier.

RECEIPTS FOR 1906.

Balance, January 1st, 1906			$115,082.33
Advance Water Rent Collection		$295,386.41	
Less Error in Advance		.62	
		$295,385.79	
Hose Water Rent Collection		1,746.50	
Fractional Water Rent Collection		938.24	
Sprinklers Water Rent Collection		2,466.00	
Building Water Rent Collection		8,233.35	
Special Water Rent Collection		2,576.96	
Arrears Water Rent Collection		5,214.98	
Measured Water Rent Collection		621,269.06	
Service Collection Account		21,979.19	
Sales on Service		53.20	
Penalties and Fines		326.22	
Rents, Real Estate	$1,350.00		
Error Corrected	60.00		
		1,410.00	
Sundry Personal Accounts		67,386.43	
Refund—Pay Roll		18.00	
Service Liens		98.25	
			1,029,102.17
Total			$1,144,184.50

DISBURSEMENTS FOR 1906.

Weekly Pay Roll	$153,654.98
Monthly Pay Roll	51,348.20
Bond Interest	460,255.00
Sinking Fund	203,900.00
Blacksmithing and Horse Shoeing	570.11
Printing and Stationery	2,940.68
General Supplies	2,421.15
Paint and Painters' Supplies	1,099.46
Plumbers' Supplies and Service	530.60
Stop and Curb Boxes	3,175.83
Clay Pipe	30.70
Masons' Material and Work	2,438.57
Coal and Wood	998.43
Stable Supplies	104.45
Hay, Feed, etc	2,003.13
Lead Pipe	6,623.09
Horse and Wagon Hire	548.85
Inspection of Pipe	266.48
Engineers' Supplies	298.41
Freight	251.49
Truck Hire	246.50
Extra Time and Labor	212.50
Extra Heavy Lead Pipe	25.38
Pig Lead	6,282.36
Meter Repair Parts	1,343.78
General Repairs	667.74
General Expense	157.57
Gasolene and Kerosene	807.82
Harness and Repairs	382.47
Ice	151.15
Lumber	2,626.93
Refund	81.00
Galvanized and extra Heavy Pipe	125.67
Gum or Rubber Boots	426.75
Brass Gate Valves	55.92
Petty Expenses, Engineering Department	1,661.61

Petty Expenses, Accounting Division	$1,143.45
Repairing Tools	1,381.84
Castings	5,395.06
New Hydrants	7,254.10
Sleeves and Valves	1,914.44
Water Gates	3,742.41
New Meters	16,141.30
Electricity, Light and Power	359.55
Cast Iron Pipe	38,388.07
Insurance	58.00
Repairs to Wagons	883.90
Corporation and Curb Stops	3,552.44
Jute	227.22
Advertising	48.50
Telephone Service	553.23
Signal Service	53.95
Gas	261.30
Office Supplies	22.20
Hydrant Repair Parts	264.10
Valves	288.70
Addressograph Supplies	59.63
Veterinary	145.15
Electrical Repairs and Supplies	28.78
Solder	529.56
Carpenter Work and Supplies	50.00
Board, Lodging and meals	150.10
Repairs to Telephone Line	157.21
Gas Company, for Changing 6" Main	24.30
Correction Account of Rent	60.00
Guaranty for Mill Brook Sewer	1,000.00
Repaving Street Cuts	3,349.99
Plants and Bulbs	273.62
Maps	30.00
City Directories	18.00
Expert Valuation Real Estate	50.00
Water Bond, No. 28	50,000.00
New Tools	22.47
Photo Supplies	66.17
Board of Horses	1,546.50
New Water Keys	18.00
Drugs	9.02
Repairs to Keeper's House	46.00
New Horses	1,200.00
Rubber Hose	133.00

Inspection of Boilers	$30.00
Heating Plant, Cedar Grove	275.00
Rent	125.00
New House, Cedar Grove	522.12
New Office Furniture	91.97
Tax	2,574.87
Total	$1,053,234.98

COMPARATIVE STATEMENT OF DISBURSEMENTS.

1905—1906.

Street Main Extension	$39,125.88	$42,164.89
Feeders	40,039.12	45,763.73
Reconstruction	7,893.68	12,969.84
Maintenance General, and Repairs	15,563.39	13,427.58
Repair of Tools	1,308.25	726.00
General Expense	6,666.44	6,356.54
Handling Material	1,667.77	631.39
Engineer and Supt. Expense	10,402.82	12,151.26
Accounting Division Expense	32,104.56	33,028.07
Meter Division	15,134.60	16,389.07
Distributing Reservoirs	6,770.49	6,232.92
Meter Repairs	5,457.12	5,620.16
Repair, Department Meters	1,337.60	1,117.50
Repair, Belleville Reservoir	24.40	105.57
Repair, So. Orange Ave. Reservoir	2,845.91	143.90
Repair, Services	10,630.71	6,955.13
Repair, Hydrants and Settings	10,221.05	14,509.24
Inspection	13,128.83	13,954.00
Stable Expense	5,127.19	6,847.17
Service Account	23,590.73	23,428.92
Pumping Stations	2,392.00	2,388.00
Maintenance New Water Supply	14,920.46	18,174.61
Miscellaneous Labor	7,060.44	6,096.97
Stable Stock and Fixtures	225.00	1,210.90
Office Furniture	571.35	114.63
New Meters	10,714.80	15,839.44
New Hydrants	3,061.50	4,129.50
Insurance	1,023.63	694.42
General Supplies	3,125.13	1,801.05
New Tools	13.45	40.00
Repair, Street Mains	4,139.10	4,514.17
Land for New Water Supply	20,450.00	.....
Sinking Fund	203,900.00	203,900.00

Interest on Water Bonds	$428,446.10	$460,255.00
New Storage Reservoir	884.05	1,127.55
Loss and Gain, Refunding, etc.	655.09	2,873.02
Miscellaneous, Material, etc.	14,280.59	41,171.50
Track Elevation	1,161.51	.....
High Pressure Water System	34,065.36	501.68
Maintenance New Storage Reservoir	2,855.94	5,129.75
Maintenance Conduits	8,999.32	14,516.99
Maintenance Reservoirs, Grounds, etc.	258.39	6,232.92
Total	$1,012,243.75	$1,053,234.98

Accounts Receivable.

December 31st, 1906.

Advance Water Rent Account	$12,851.88
Fractional Water Rent Account	496.70
Measured Water Rent Account	41,529.85
Special Water Account	681.47
Building Water Account	159.85
Arrears Water Rent Account	4,061.25
Service Collection Account	1,065.00
Sundry Personal Accounts	55,068.38
Total	$115,914.38

Trial Balance.

December 31st, 1906.

Cash			$90,949.52	
Construction			2,625,116.91	
High Pressure Water Bonds			.....	$100,000.00
Coupon Bond Account			.....	2,710,000.00
Registered Bond Account			.....	7,167,000.00
New Storage Reservoir Bond Account			.....	1,950,000.00
Stable, Stock and Fixtures			6,623.90	
Petty Cash			306.07	
Office Furniture, Fixtures and Fittings			11,190.60	
Water Meter Account			3,467.93	
Department Meters			22,805.00	
Hydrant Account			2,519.50	
Insurance			694.42	
Street Mains, Stock and Material			26,159.29	
Service Stock			2,508.01	
Real Estate, General			104,768.09	
Tool Account			11,045.40	
Meter Repair Stock			1,444.32	
High Pressure Water System:				
Inventory		16,655.04		
Cost		103,269.98	119,925.02	
Surplus and Deficiency			633,955.03	
New Water Supply			6,194,519.41	
Service Collection			1,065.00	
Advance Water Rent Collection Acct.			12,851.88	
Fractional Water Rent Collection Acct.			496.70	
Building Collection			159.85	
Special Water Collection			681.47	
Measured Water Collection Acct.			41,529.85	
Arrears Water Rent Collection Acct.			4,061.25	
Sundry Personal Collection			55,068.38	
Cedar Grove Reservoir, Stock & Fixtures			1,959.65	
New Storage Reservoir, Material Acct.			1,127.55	
New Storage Reservoir, Construction Account, Balance of Bond Issue,		80,403.49		
Cost		1,869,596.51	1,950,000.00	
			$11,927,000.00	$11,927,000.00

Assets and Liabilities.

Cash Balance, December 31st, 1906....	$90,949.52	
Property	11,005,777.58	
Accounts Receivable.....	115,914.38	
New Storage Reservoir Constr'n Acct.	80,403.49	
Coupon Bonds.....		$2,710,000.00
Registered Bonds.....		7,167,000.00
High Pressure Water Bonds.....		100,000.00
New Storage Reservoir Bonds.....		1,950,000.00
Surplus and Deficiency.....	633,955.03	
	$11,927,000.00	$11,927,000.00

Schedule of Properties, 1906.

Department of Water.

Belleville Pumping House.....	$23,750.00	
" Boiler House Extension.....	1,900.00	
" Engineer & Fireman's Dwelling	9,500.00	
" New Chimney.....	5,225.00	
" Pumping Engine No. 1.....	4,750.00	
" " " No. 2.....	4,750.00	
" " " No. 3.....	14,250.00	
" " " No. 4.....	19,000.00	
New Boilers.....	14,856.40	
		$97,981.40
River Wall, Dock and Basin.....	$23,750.00	23,750.00
Driven Wells.....	21,161.26	
Drilled Wells.....	34,364.34	
Caisson Wells.....	2,331.11	
		57,856.71
Belleville Keeper's House.....	$1,425.00	
High Service Engine House.....	14,250.00	
High Service Engine House Extension..	2,375.00	
New Boiler, Clifton Avenue.....	1,900.00	
High Service Pumping Engine No. 2....	4,750.00	
High Service Pumping Engine No. 3....	4,750.00	
Belleville Receiving Reservoir.....	128,303.71	
Belleville Reservoir Appurtenances.....	8,083.49	
High Service Reservoir, So. Orange Ave.	90,839.70	
Low Service Reservoir.....	116,799.71	373,476.61
Street Mains, General, 1905.....	1,418,197.09	
" " " 1906	42,164.89	
		$1,460,361.98

Pumping Main No. 1		$72,399.45	
Pumping Main No. 2		36,942.42	
Supply Main No. 1		118,703.27	
Supply Main No. 2		63,866.16	
Supply Main No. 2 Section A		39,111.74	
Distributing Main No. 2		49,760.62	
Extra High Service Main		26,365.55	
Twelfth Ward Feeder		5,594.42	
Ingraham Place Feeder		1,108.80	
Bridge Street Feeder		1,755.76	
Regular High Service Feeder No. 2		17,245.79	
Regular High Service Feeder No. 2, Extension		9,540.85	
Forest Hill Feeder		5,390.63	
Roseville Feeder		18,202.46	
Seventh Avenue Feeder		4,083.05	
South Street Feeder		2,016.05	
Fourteenth Avenue Feeder		4,216.50	
Ferry Street Feeder		5,927.02	
South Ninth Street Feeder		648.79	
Fourteenth Street Feeder		1,339.91	
Waverly Avenue Feeder		748.08	
Hawthorne Avenue Feeder		654.76	
Verona Avenue Feeder		1,498.23	
Special High Service Feeder		935.72	
Feeders, 1905	$53,320.30		
Feeders, 1906	45,763.73		
		99,084.03	
Distributing Main No. 2 Extension		3,749.38	
Distributing Main No. 1		46.81	
High Service Main No. 1		45.00	
High Service Main No. 2		17,885.48	
Low Service Supply Main No. 3		1,068.16	
Weir at Water Shed		669.44	
New Storage Reservoir Material Acct.		1,127.55	
			$2,625,158.58

REAL ESTATE

No. 1. No. 128 Halsey Street	$26,964.15	
" 5. Nominal,	100.00	
" 6. Seventh and Summer Avenues	4,000.00	
" 12. Ground and Building New City Stables	26,958.47	
" 13. Right of Way and Alley, Millbrook Sewer	75.00	

No. 14. Drift Street at Factory Street Nominal	$20.00	
" 16. Clifton Ave Pump House	6,000.00	
" 18. Low Service Reservoir, Nominal.	1.00	
" 52. Hecker Street, Nominal	100.00	
" 53. So. O. Ave. Reservoir, Nominal	1.00	
" 54. Cor. 14th Ave. & 9th Street	4,975.00	
" 55. Cor. 14th. Ave & 8th Street	7,500.00	
" 56. Belleville Pump House, and Six Houses	11,883.64	
" 57. Opposite Pump House	1,693.92	
" 58. Belleville Reservoir, Nominal	1.00	
" 59. Part of Belleville Res. Property.	532.50	
" 60. Back of Belleville Res. Property.	11,113.86	
" 61. Portion Right of Way, Supply Main No. 2	450.00	
" 62. Portion Right of Way, Supply Main No. 2	339.00	
" 63. Portion Right of Way, Supply Main No. 2	389.55	
Land for Drilled Wells, Belleville, N. J.	1,670.00	
		$104,768.09
Total		$2,729,926.67

INVENTORY

Street Mains, Stock and Material	$26,159.29	
Service Stock and Material	2,508.01	
Hydrants on Hand	2,519.50	
Water Meters on Hand	3,466.93	
Meter Repair Stock	1,444.32	
Tools	11,045.40	
Stable Stock and Fixtures	6,623.90	
Office Furniture, Fixtures and Fittings	11,190.60	
Cedar Grove Reservoir	1,959.65	
Petty Cash	306.07	
Water Meters owned and Set by Department	22,805.00	
Insurance	694.42	
High Pressure Water System Stock	16,655.04	
		$107,379.13
New Water Supply	$6,194,519.41	
New Storage Reservoir	1,869,596.50	
High Pressure Water System	103,269.98	
		8,167,385.89
Total		$8,274,765.02

Expended on Account of New Storage Reservoir and Thirty-Six Inch Cast Iron High Service Supply Pipe Line

To December 31st, 1906.

New Storage Reservoir, Tunnel and Sixty-inch Steel Pipe Line.

Labor.	$57,765.81	
Iron Pipe and Castings	82,247.33	
Inspecting Pipe	1,054.22	
Payments on Contracts	1,232,920.18	
Engineering Expense, etc	31,028.11	
Interest on Loan	119,159.25	
Taxes.	56.73	
Land.	93,689.39	
Right of Way	1,550.00	
Expense of Condemnation	3,890.95	
Gate House	17,681.00	
	$1,641,042.97	
THIRTY-SIX INCH SUPPLY PIPE LINE Between South Orange Avenue and Belleville Reservoir.		
Labor.	44,353.81	
Iron Pipe and Castings	95,978.19	
Interest on Loan	37,884.77	
Inspecting Pipe	1,000.91	
Carting Pipe	3,729.95	
Right of Way	3,450.00	
Caulking Machine	490.00	
Miscellaneous Material	25,304.90	
Work at Second River and South Orange Avenue and Eighth Street	920.12	
Expenses.	2,071.00	
Building Sewer, Township of Bloomfield.	1,750.0	
Payment on Contract for Outlet Tunnel	11,777.88	
		$228,711.53
Total		$1,869,754.50
Less hay sold in 1901		158.00
		$1,869,596.50

Fund for the Construction of a Storage Reservoir

December 31st, 1906.

CASH ACCOUNT.

Balance, January 1st, 1906		$1,482.78
Interest on Investment	$3,500.00	
Rents, Real Estate	410,00	
Total Receipts for 1906	3,910.00	
Sale of Bond, No. 28	50,000.00	53,910.00
		$55,392.78
Balance to credit of account with City Treasurer, December 31, 1906		$55,392.78

TRIAL BALANCE.

Cash	$55,392.78	
Ivy Hill Property	81,828.40	
Belleville Property	13,965.35	
Charlottesburgh Property	50,670.07	
253 Acres of Land in Pequannock Water Shed	3,250.00	
Storage Reservoir Account		205,106.60
	$205,106.60	$205,106.60

REAL ESTATE AND SECURITIES.

Ivy Hill Property, South Orange, N. J.	$81,828.40
Belleville, N. J., Property	13,965.35
Charlottesburg, N. J., Property	50,670.07
253 Acres of Land in Pequannock Water Shed	3,250.00
Total	$149,713.82

Month.	Date of Act	Year of Issue	Title.	When Due.	Rate of Interest.	Amount.	Rate of Sinking Fund.	Yearly Interest.	Interest Due.	Annual Sinking Fund Payments.	Amount in Sinking Fund Nov. 30, 1906
April 21	1876	1877	Water.	1906	7 %	$50,000.00	None.	$3,500.00	Feb. and Aug.	----------	----------
April 21	1876	1879	"	1909	5 %	100,000.00	None.	5,000.00	May " Nov.	----------	----------
March 6	1884	Oct. 1, 1884	"	1914	4 %	30,000.00	3% City Pays	1,200.00	April " Oct.	City Pays	$29,614.87
March 6	1884	Feb. 1, 1885	"	1915	4½%	200,000.00	3% "	9,000.00	Feb. " Aug.	"	180,895.18
March 6	1884	Oct. 31, 1885	"	1915	4½%	15,000.00	3% "	675.00	May " Nov.	"	13,579.45
March 6	1884	Aug. 1, 1886	"	1916	4 %	12,000.00	3% "	480.00	Feb. " Aug.	"	9,867.54
March 6	1884	April 1, 1887	"	1917	4 %	15,000.00	3% "	600.00	April " Oct.	"	11,452.53
March 6	1884	March 1, 1888	"	1918	4½%	20,000.00	3% "	900.00	Mar. " Sept.	"	14,149.49
March 26	1888	Dec. 29, 1888	"	1908	4 %	20,000.00	3% "	City Pays	Tax Levy.	"	15,483.71
March 26	1888	Dec. 30, 1890	"	1910	4 %	20,000.00	3% "	"	"	"	13,265.78
March 26	1888	Sept. 15, 1891	"	1911	5 %	70,000.00	3% "	"	"	"	40,478.24
March 26	1888	Oct. 10, 1892	"	1912	4 %	20,000.00	3% "	"	"	"	10,590.17
March 26	1888	Nov. 15, 1893	"	1913	4 %	55,000.00	3% "	"	"	"	26,762.62
March 26	1888	Aug. 21, 1895	"	1915	4 %	40,000.00	3% "	"	"	"	15,734.65
March 26	1888	Oct. 20, 1896	"	1916	4 %	40,000.00	3% "	"	"	"	14,054.82
May 14	1889	Feb. 1, 1892	Funded Water Debt.	1922	4 %	2,450,000.00	2% Water Dept.	98,000.00	Feb. and Aug.	$49,000.00	864,862.87
May 14	1889	May 1, 1892	New Water Supply.	1922	4 %	4,000,000.00	2% "	160,000.00	May " Nov.	80,000.00	1,675,238.89
May 14	1889	Nov. 1, 1900	"	1922	4 %	2,000,000.00	2% "	80,000.00	May " Nov.	40,000.00	
May 14	1889	Aug. 1, 1897	Funded Water Debt.	1927	4 %	100,000.00	2% "	4,000.00	Feb. " Aug.	2,000.00	20,723.82
May 18	1898	Oct. 18, 1899	Water.	1919	4 %	20,000.00	3% "	800.00	Feb. " Aug.	600.00	4,677.65
May 18	1898	Aug. 1, 1900	"	1920	4 %	20,000.00	3% "	800.00	April " Oct.	600.00	3,948.26
May 18	1898	Sept. 1, 1901	"	1921	4 %	20,000.00	3% "	800.00	Mar. " Sept.	600.00	3,231.67
May 18	1898	Oct. 1, 1902	Street Main Extension.	1922	4 %	30,000.00	3% "	1,200.00	April " Oct.	900.00	3,805.69
May 18	1898	July 1, 1903	"	1923	4 %	30,000.00	3% "	1,200.00	Jan. " July	900.00	3,304.75
	1905	Aug. 1, 1904	High Pressure 30 Years.	1934	3½%	100,000.00	2% "	3,500.00	Feb. " Aug.	2,000.00	4,081.14
	1905	April 1, 1905	Cedar Grove Reservoir.	1955	3½%	1,950,000.00	1% "	68,250.00	April " Oct.	19,500.00	39,791.12
	1905 Renewal	May 1, 1905	Street Main Extension.	1925	4 %	50,000.00	3% "	2,000.00	May " Nov.	1,500.00	3,060.86
	1875	May 1, 1905	Water.	1955	3½%	490,000.00	1% "	17,150.00	May " Nov.	4,900.00	9,998.73
		Oct. 1, 1898	Vailsburgh Water Bond 15 Years.	1913	4½%	20,000.00	5% "	900.00	April " Oct.	1,000.00	4,910.54
		Oct. 1, 1898	Bond 30 Years.	1928	4½%	20,000.00	2% "	900.00	April " Oct.	400.00	2,251.22
						$12,007,000.00		$460,855.00		$203,900.00	$3,039,816.32

The Water Department pays both Interest and Sinking Fund on Bonds issued under acts of 1875 (Renewal), 1889, 1898 and 1905, and the Interest on Bonds issued under the acts of 1876 and 1884. These payments amounted to a total fixed charge for the year 1906 of $664,755.00.

The Water Department does not pay Interest or Sinking Fund on Bonds issued under the act of 1888 nor Sinking Fund on Bonds issued under the act of 1884. These payments are made from the tax levy and amount to $20,060.00 per year.

The last two items of $20,000.00 each are bonds issued by Vailsburg which the city assumed after annexation January 1st, 1905. The Water Department pays both Interest and Sinking Fund.

The Bond issued in 1877 and due in 1906 amounting to $50,000.00 was paid from the receipts of the Department.

REPORT OF

Engineer of Streets and Highways.

To the Chief Engineer of the Board of Street and Water Commissioners of the City of Newark, N. J.

DEAR SIR:—The following annual report of the Engineering Division of the Department of Streets and Highways, for the year ended December 31st, 1906, is herewith submitted showing the streets and highways improvements and other work appertaining thereto.

STREET IMPROVEMENTS.

NEW PAVEMENTS.

During the year twenty-six contracts for pavements were awarded of which nineteen (19) were completed, amounting to $216,015.02. There were also six contracts awarded in 1905 to be completed, viz: Third Avenue, Summit Street, Lackawanna Avenue, South 11th Street, Johnson Street and South 14th Street. These amounted to $103,745.65 and were completed during the early part of the year 1906.

Of the seven contracts not fully completed, the paving of Carteret Street was practically finished, although the final estimate for the same was not ordered paid; the paving of North 14th Street was partly finished; on Bigelow Street there remain two blocks to be finished. The work on Central Avenue was started as soon as the contract was awarded, which was so late in the season that only a small portion was completed, and for the same reason no work was done on Grafton Avenue. In connection with two other contracts awarded during the year, namely, Niagara Street and the North 11th Street and 6th Avenue bridge approaches, no work was done on account of court proceedings. The total estimated cost of these seven streets is $134,551.19.

STREETS PAVED PRIVATELY.

There were four additional streets paved privately, viz: Brandford Place from Broad Street 130 feet west, Division Street from Broad Street to the east side of Spring Street, Spring Street from Orange Street to Division Street, with bitulithic pavement on a concrete foundation and South 12th Street from Clinton Avenue to Avon Avenue with Porter Fire Clay Block on a concrete foundation with a cement filler. This work was done with the consent of the Board and the pavements laid in accordance with the official form of contract, specifications and plans furnished by this department.

The quantity of paving laid during 1906 is as follows:

	Public.		Private.	
	Miles.	Square Yards.	Miles.	Square Yards.
Granite on concrete	0.28	4,298		
" " sand	0.388	6,478		
Brick on concrete	5.40	112,091	0.265	5,066
Telford	0.923	14,308		
Bitulithic			0.175	3,324
Total, public	6.991	137,175		
" Private	0.440	8,390		
Total	7.431	145,565		

For itemized statement see Table No. 1.

The amount paid to inspectors on street pavings that were completed was $5,950.00 making an additional cost of $0.046 per sq. yd or .0186 per cent. of the contract cost.

The average price paid per lineal foot for furnishing and setting new bluestone curb and resetting old curb was as follows:

New 20" x 4" curb quarry cut, set in concrete $0.64 per lineal ft.
" " " " " " " " sand 0.52 "
" " " four cut or coarse axed set in sand $0.68 "
" " " " " " " " " concrete 0.82 "
" 16" x 4" curb quarry cut set in concrete $0.61 2-3 per lin. ft.
Old curb redressed, set in concrete 0.23¼ per lineal ft.

KINDS OF STREET PAVEMENTS.

The amount of the different kinds of street pavements on December 31st, 1906, are as follows:

Sheet asphalt	51.298	miles.
Granite block	52.565	"
Telford	24.626	"
Trap or Belgian block	11.539	"
Brick	19.935	"
Cobblestone	8.261	"
Bitulithic	2.191	"
Wood block	0.075	"
Total	170.490	miles.

There are about 95 miles of unpaved streets within the city limits.

In connection with the four contracts completed during the year 1906 for Telford pavement, a treatment of the top surface by the use of "Tarvia" was included as a part of the contract, for which an allowance of ten cents per square yard in addition to the contract price paid for Telford was allowed. These pavements were completed late in the Summer and the "Tarvia" finish seemed to give satisfactory results. It is, however, too early to give a positive expression as to the permanent results of this treatment and also as to the effect of the Winter on these streets. It will perhaps be necessary to give the streets another treatment with a similar amount of this preparation in order to obtain any lasting results from its application.

GRADING, CURBING AND FLAGGING.

There were five (5) contracts awarded during the year; Doremus Avenue, grading; Passaic Avenue, grading and curbing; Meeker Avenue, grading and curbing; Runyon Street, grading and curbing; Lawrence street, grading curbing and flagging, at an estimated cost of $30,828.73, only one of which (Meeker Avenue) has been completed.

There were two (2) grading, curbing and flagging contracts awarded during the year 1905 and completed during 1906, viz.: Chadwick Avenue and Elizabeth Avenue.

For itemized statement see Table No. 2.

With the annexation of the Borough of Vailsburgh on Jan. 1st, 1905, there were twenty-nine (29) contracts for grading, curbing and flagging which had been awarded but no work done. The above contracts were completed during the year 1906, and by contract made previous to annexation the work was done under the supervision of Eugene McMurray, formerly Engineer of the Borough of Vailsburgh. As to costs and Engineer's charges, see Table No. 3 for itemized statement.

MISCELLANEOUS.

ASPHALT REPAIRS AND RESURFACING.

During the year, the whole of the asphalt wearing surface in Court Street from High Street to Howard Street, Barclay Street from West Kinney Street to Montgomery Street, Mt. Prospect Avenue from Sixth Avenue to Park Avenue, owing to the wearing surface being cracked and having depressions, was taken up and new asphalt covering laid on a binder course. This work was done by the Standard Bitulithic Co. The price paid was $0.98 per square yard for 8,830 sq. yds., making a cost of $8,768.00 for this work.

There were also a number of asphalt repairs made on

twenty-seven (27) different streets by the same Company, amounting to 6,806 5-9 sq. yds., at $0.98 per sq. yd., at a cost of $6,673.27. This work was done under a six months guarantee.

REPAIRING OF MT. PLEASANT AVENUE BRICK PAVEMENT.

Mount Pleasant Avenue from Clay Street to Harvey Street was paved during the year 1903 by The Barber Asphalt Paving Company under a contract which has a guarantee provision in force until October, 1908. The condition of this pavement has been unsatisfactory ever since its completion, the final estimate for the work having been paid only upon the order of the court after proceedings on behalf of The Barber Asphalt Paving Company, the Board of Street and Water Commissioners having previously refused to pay the same. The court's order related to the payment of the final estimate only and the Company is still considered to be obliged to fulfill its guarantee. During the month of November, 1906, the Company took up the pavement on the block between Third and Fourth Avenues; the bricks were turned and those badly worn were replaced with new bricks, and the relaid pavement was grouted with Portland cement. In the original contract, the joints were filled with sand. Similar or more radical repairs will be necessary on the remaining portions of the Avenue.

STREET OPENINGS.

During the year, the following streets were opened:

Bergen Street, Lehigh Avenue to Lyons Avenue.

Lawrence Street, Commerce Street to South Canal Street.

Murray Street, Goble Street to Avenue C.

Runyon Street, Milford Avenue to Johnson Avenue.

S. 8th Street, 14th Avenue to 15th Avenue.

Also Park, at Bank Street, Wallace Street and Wallace Place.

STREETS VACATED DURING 1906.

Boyden Street, Orange Street North to M. & E. R. R.

Montgomery Avenue, 16th Avenue to 14th Avenue.

Myrtle Street, Pennsylvania Avenue to Frelinghuysen Avenue.

Old Osborne Street, Lister Avenue to Albert Avenue.

Old Road, North of Trenton Street P. R. R. to Frelinghuysen Avenue.

Penna. Avenue, Empire Street to Old City Line.

Princeton Street P. R. R. to Frelinghuysen Avenue.

Penna. Avenue, Empire Street to Montague Street.

Sheffield Street, Orange Street north to M. & E. R. R.

Trenton Street, Penna. Avenue to Frelinghuysen Avenue.

Victoria Street, Penna. R. R. to Frelinghuysen Avenue.

TRACK ELEVATION AND DEPRESSION.

WORK IN CONNECTION WITH THE LACKAWANNA R. R.

During the year the approaches to Second Street, Clifton Avenue, Nesbitt Street and Eighth Avenue were repaved by the City. The Lackawanna Railroad Company laid concrete sidewalks on both sides of Lackawanna Avenue from Eighth Avenue to Nesbitt Street and recurbed and regraded the Avenue between the points named. One continuous concrete sidewalk was also laid by the Railroad Co., on the north side of Orange Street from Second Street to Eighth Avenue. The new inclined plane at the crossing of Orange Street and the Morris Canal constructed by the Lackawanna R. R. at the joint expense of the Public Service Corporation, the City of Newark and the Lackawanna R. R. Co. was completed and placed in service on May 8th, 1906, the first canal boat passing over the plane on that day. The

former old bed of the canal crossing Orange Street was filled and paved by the City.

The only street approaches to the Lackawanna R. R. depression in Roseville remaining unpaved are those at North 11th Street and Sixth Avenue for which a contract was awarded to the Barber Asphalt Paving Co. A rival paving concern contested the award of the contract in the Supreme Court of the State, and the Court's decision in favor of the Barber Co. was not handed down in time to allow the completion of this work during 1906.

In exchange for small portions of Sheffield Street and Boyden Street, north of Orange Street vacated by the City, the Lackawanna R. R. Co. has agreed to erect and maintain an overhead foot bridge over the railroad at Sheffield Street. The Company has also agreed to put in service at an early date, steps leading directly from their eastbound platform at Plane Street, that there may not be any further necessity for passengers from points West on arrival at Newark passing through station building before reaching Plane Street.

The Public Service Corporation relaid with heavy rails and repaved their tracks with granite block pavement on a concrete base on the following streets:

Central Ave. from First St. to E. O. line	3,550	ft.	double	track
Central Ave. from Broad to Burnet St.	1,800	"	"	"
S. O. Ave. from Springfield Ave. to S. 20th St.	8,200	"	"	"
S. O. Ave. from S. 20th St. to Munn Ave.	2,400	"	"	"
Spring'ld Ave. from S. O. Ave. to S. 10th St.	6,500	"	"	"
Spring'ld Ave. from Market St. to S. O. Ave.	1,100	"	"	"
Fifteenth Ave. fr. Spring'ld Ave. to Bergen St.	1,680	"	"	"
Broad St. from Market St. to Morris Canal	750	"	"	"
Wash'ton St. from Market St. to Central Ave.	2,270	"	"	"
S. 14th St. from Central Ave. to Orange St.	2,375	"	"	"
Total	30,625	"	"	"

Amounting to 5.80 miles of double track or 11.60 miles of single track.

BRICK TESTS.

The following tests of samples submitted by various paving concerns, and of material taken from paving work under way, were made during the year: Adams Street, Beach Street, Bigelow Street, Carteret Street, Cherry Street, Crittenden Street, Hamilton Street, Hedden Street, Hillside Avenue, Ingraham Place, Jelliff Avenue, Lackawanna Avenue, Littleton Avenue, Nairn Place, North 11th Street, South 11th Street, Summer Place, Summit Street Summit Place and Third Avenue.

Abrasion tests in Standard Rattler were made of 349 bricks and blocks, and forty-eight (48) bricks and blocks were tested in the old style rattler, 397 in all.

Breaking tests were made on 135 bricks and blocks of which number 21 were tested at Stevens Institute, Hoboken, N. J., and 114 at the laboratory of James W. Howard, C. E., Newark, N. J.

Absorption tests were made on 214 bricks and blocks at the office of this department.

MISCELLANEOUS SURVEYS, ETC.

In addition to the regular Field and Office work of this department, the following surveys and maps were made for public departments not under the jurisdiction of the Board of Street and Water Commissioners:

School House Surveys and Plans thereof....	13
Engine House Surveys and Plans thereof.....	6
Police Precincts and Plans thereof.....	1
Public Library Annex and Plans thereof....	1
Encroachment on public street.....	4
Boundary Line Survey, Dep't. of Public Buildings	1

The staff of assistants at the close of the year is as follows:

WM. A. HOWELL, Principal Assistant Engineer.
CHAS. A. STILGER, Eng'r. of Construction.
WALTER W. KANE, 1st. Assistant Engineer.
DAVID M. CRABB, Transitman.
MONCKTON MICHELL, Leveller.
CLIFFORD L. LANDMESSER, Leveller.
GEO. C. BRANDLEY, Principal Office Asst.

(The latter attends to both the Street and Sewer Department work.)

Respectfully submitted,

LOUIS C. DITTLER,
Engineer, Streets and Highways.

[illegible] CURBING AND FLAGGING CONTRACTS OF THE LATE BOROUGH OF VAILSBURG COMPLETED DURING 1906 UNDER THE SUPERVISION OF EUGENE McMURRAY.

TABLE NO. 3.

Number	NAME OF STREET	Grading, Amount of Estimate.	Curbing, Amount of Estimate.	Sidewalks, Amount of Estimate.	Engineer's Charges.	Cost of Improvement.	CONTRACTORS.	REMARKS.
1	Abbotsford Ave.	$647.78			$32.39	$680.17	Frank Snyder	
2	" "		$829.13		41.45	870.58	Jacob Clark Stone Co.	
3	" "			$482.05	24.10	506.15	Essex Co. Construction Co.	
4	Bedford St.	3,072.87			153.64	3,226.51	Frank Snyder	Now Palm St.
5	" "		1,637.85		81.89	1,719.74	Jacob Clark Stone Co.	" " "
6	" "			2,340.96	117.05	2,458.01	Essex Co. Construction Co.	" " "
7	Crawford St.	1,264.80			213.24	1,478.04	Frank Snyder	Now Smith St.
8	" "		1,716.70		85.83	1,802.53	Jacob Clark Stone Co.	" " "
9	" "			2,277.60	113.88	2,391.48	Essex Co. Construction Co.	" " "
10	Finlay Pl.	936.92			46.85	983.77	Frank Snyder	
11	" "		1,192.79		59.64	1,252.43	Jacob Clark Stone Co.	
12	" "			1,317.75	65.89	1,383.64	Essex Co. Construction Co.	
13	Halsted St.	1,151.38			207.57	4,358.95	Frank Snyder	
14	" "		885.85		44.29	930.14	Jacob Clark Stone Co.	
15	" "			1,325.32	66.27	1,391.59	Essex Co. Construction Co.	
16	Kenmore Ave.	1,029.47			51.47	1,080.94	Frank Snyder	
17	" "		996.35		49.82	1,046.17	Jacob Clark Stone Co.	
18	" "			1,285.50	64.27	1,349.77	Essex Co. Construction Co.	
19	Lanark Ave.	783.08			39.15	822.23	Frank Snyder	
20	" "		860.55		43.03	903.58	Jacob Clark Stone Co.	
21	" "			1,063.76	53.19	1,116.95	Essex Co. Construction Co.	
22	Lilly St.	1,042.07			52.10	1,094.17	Frank Snyder	Now Salem St.
23	Marion Ave.	755.80			37.79	793.59	Frank Snyder	
24	" "		469.98		23.50	493.48	Jacob Clark Stone Co.	
25	" "			626.20	31.31	657.51	Essex Co. Construction Co.	
26	Sunset Ave.	2,318.70			115.93	2,434.63	Frank Snyder	
27	" "			2,718.77	135.94	2,854.71	William H. Turrell	
28	Smith St.			1,330.20	216.51	4,546.71	Jacob Clark Stone Co.	
29	West End Ave.	6,251.59			312.58	6,564.17	Frank Snyder	
		$25,254.46	$8,589.20	$17,768.11	$2,580.57	$54,192.34		

GRADING, CURBING AND FLAGGING CONTRACTS [illegible] ATE BOROUGH [illegible]
COMPLETED DURING 1906 UNDER THE SUPERVISION OF EUGENE McMURRAY.

TABLE NO. 3.

Number.	NAME OF STREET	Grading. Amount of Estimate.	Curbing. Amount of Estimate.	Sidewalks. Amount of Estimate.	Engineer's Charges.	Cost of Improvement.	CONTRACTORS.	REMARKS.
1	Abbottsford Ave.	$647.78			$32.39	$680.17	Frank Snyder	
2	" "		$829.13		41.45	870.58	Jacob Clark Stone Co.	
3	" "			$482.05	24.10	506.15	Essex Co. Construction Co.	
4	Bedford St.	3,072.87			153.64	3,226.51	Frank Snyder	Now Palm St.
5	" "		1,637.85		81.89	1,719.74	Jacob Clark Stone Co.	" " "
6	" "			2,340.96	117.05	2,458.01	Essex Co. Construction Co.	" " "
7	Crawford St.	4,264.80			213.24	4,478.04	Frank Snyder	Now Smith St.
8	" "		1,716.70		85.83	1,802.53	Jacob Clark Stone Co.	" " "
9	" "			2,277.60	113.88	2,391.48	Essex Co. Construction Co.	" " "
10	Finlay Pl.	936.92			46.85	983.77	Frank Snyder	
11	" "		1,192.79		59.64	1,252.43	Jacob Clark Stone Co.	
12	" "			1,317.75	65.89	1,383.64	Essex Co. Construction Co.	
13	Halsted St.	4,151.38			207.57	4,358.95	Frank Snyder	
14	" "		885.85		44.29	930.14	Jacob Clark Stone Co.	
15	" "			1,325.32	66.27	1,391.59	Essex Co. Construction Co.	
16	Kenmore Ave.	1,029.47			51.47	1,080.94	Frank Snyder	
17	" "		996.35		49.82	1,046.17	Jacob Clark Stone Co.	
18	" "			1,285.50	64.27	1,349.77	Essex Co. Construction Co.	
19	Lanark Ave.	783.08			39.15	822.23	Frank Snyder	
20	" "		860.55		43.03	903.58	Jacob Clark Stone Co.	
21	" "			1,063.76	53.19	1,116.95	Essex Co. Construction Co.	
22	Lilly St.	1,042.07			52.10	1,094.17	Frank Snyder	Now Salem St.
23	Marion Ave.	755.80			37.79	793.59	Frank Snyder	
24	" "		469.98		23.50	493.48	Jacob Clark Stone Co.	
25	" "			626.20	31.31	657.51	Essex Co. Construction Co.	
26	Sunset Ave.	2,318.70			115.93	2,434.63	Frank Snyder	
27	" "			2,718.77	135.94	2,854.71	William H. Turrell	
28	Smith St.			4,330.20	216.51	4,546.71	Jacob Clark Stone Co.	
29	West End Ave.	6,251.59			312.58	6,564.17	Frank Snyder	
		$25,254.46	$8,589.20	$17,768.11	$2,580.57	$54,192.34		

REPORT OF

Engineer of Sewers and Drainage

MR. MORRIS R. SHERRERD,
Chief Engineer.

DEAR SIR:—I herewith respectfully present my report for the year ending December 31st, 1906.

PUBLIC SEWERS.

During the year 15 contracts were awarded for public sewers of which two remain unfinished at the end of the year. Four contracts awarded in 1905 and under construction at the beginning of the year, were also completed. The total length constructed under these contracts amounted to 40,043 lineal feet, together with 47 basins and 229 manholes at a total cost of $147,620.28.

The amount paid to Inspectors was $3,533.25 or .024% of the contract cost. In 1905 the Inspectors were paid .034% a saving due largely to the system of permanent inspectors adopted last year.

The most important work undertaken was the extension of the East Branch Intercepting Sewer, from its old terminus at St. Charles Street to Blanchard Street on the Plank Road, a distance of about 6,200 feet, at a contract cost based on the estimated quantities of $100,-987.50. This work is not yet completed.

Two relief sewers were also built; one known as the Murray Street Relief Sewer to relieve the conditions existing at Broad and Murray Streets, at a cost of $9,-324.71, and the other known as the Sixteenth Avenue Relief Sewer to relieve the old sewer in Sixteenth Avenue which becomes overcharged during heavy storms. This latter sewer is not yet finished.

PRIVATE SEWERS.

Private contracts were also made, with the consent of the Board, and under the direction of this Department

for the construction of 26 sewers, aggregating in length 15,188 lineal feet, together with 6 basins and 89 manholes. This is the greatest length of private sewers ever built in one year.

Included in the above are two sewers built by the City out of the "Sewers and Drainage Account."

The following table shows the total length and cost of sewers and appurtenances in the City:

TOTALS UP TO JANUARY 1ST, 1906 AS PER REPORT FOR 1905.

Kind.	Lineal Feet.	Miles.
Brick and Concrete	371,860	70.42
Pipe (public)	713,725	135.18
Pipe (private)	141,322	26.76
Total	1,226,907	232.36
Catch Basins	3,152	
Manholes	6,564	
Flush Tanks	93	
*Total cost prior to 1906	$4,303,636.97	

BUILT DURING 1906.

Kind.	Lineal Feet.	Miles.
Brick and Concrete	10,661	2.02
Pipe (public)	29,382	5.56
Pipe (private)	15,188	2.88
Total	55,231	10.46
Catch Basins	73	
Manholes	329	
*Total cost during 1906	$147,620.28	

TOTAL TO JANUARY 1ST, 1907.

Kind.	Lineal Feet.	Miles.
Brick and Concrete	382,521	72.44
Pipe (public)	743,107	140.74
Pipe (private)	156,510	29.64
Total	1,282,028	242.82
Catch Basins	3,225	
Manholes	6,893	
Flush Tanks	93	
*Total cost to January 1st, 1907	$4,451,257.25	

*Total cost includes public sewer contracts only.

INTERCEPTING SEWERS.

In the latter part of the year 1905, a contract was awarded to Seymour & Whitlock for making certain necessary repairs to the machinery at the Pumping Station. One set of pumps was thoroughly overhauled and put in good condition. This work was not paid for until January of the present year, the cost being $1,719.00.

In November of this year, the same firm was given the contract for repairing the second set of pumps, the contract price being $3,310.00. This work is not yet completed. No further repairs should be needed for some time to come.

The following statement shows the amount of sewage lifted at the pumping station, together with the coal used and ashes removed.

Total quantity pumped	4,812,240,412	gallons
Maximum pumped per day, March 3rd	31,633,528	"
Minimum pumped per day, August 27th	2,564,928	"
Average pumped per day	13,184,220	"
Coal consumed	1,672,992	lbs.
Ashes removed	325,864	"
Average pumped per day in 1905	13,534,078	gallons

The usual diagram showing the number of gallons pumped each day in the year is appended.

HOUSE CONNECTIONS TO CURB.

This year, for the first time advantage was taken of the second section of Chapter 107 of the State laws of 1896 permitting the City to lay house connections from old sewers to the curb line in advance of new pavement. A special appropriation of $3,000 was made by the Common Council for this purpose. Two contracts were awarded for this work; one for Niagara Street and the other for all remaining work for the year. Under this second contract, pipes were laid in 22 streets. The total length laid under both contracts amounted to 7,564 lineal feet at a total cost of $2,903.60. The cost of these connections is

charged against the property benefited and is collectible when the connection is used. $161.02 was in this way returned to the fund during the year.

On most of the sewers built during the year, connections to the curb were also laid in accordance with the first section of the above act; 6,502 feet were thus laid at a cost of $2,437.31. The cost of these connections is included in the assessment for the sewer.

As no complete statement of this work has been published heretofore, a table is appended showing details of all connections laid since the law was passed.

RAINFALL OBSERVATIONS.

The rainfall record which was begun in 1897 by Professor George C. Sonn of the High School, has, since his death on May 10th of this year, been continued by Professor William Wiener.

The records are obtained by means of a self-registering rain gauge, purchased by the city, and are appended hereto together with average daily temperature, etc. Owing to the confusion caused by the change of observers, the details of rainfall are not as complete as in former years. The total rainfall for the year was 44.14 inches against 41.75 inches for last year.

The following table shows the precipitation by months as compared with 1905.

	1905.	1906.
January	3.67	2.79
February	2.13	1.77
March	3.80	4.98
April	2.49	5.68
May	1.25	4.77
June	3.02	2.62
July	6.27	3.71
August	4.74	2.52
September	6.21	3.53
October	2.91	4.23
November	2.03	1.37
December	3.23	6.17
Total	41.75	44.14

In addition to the work mentioned, plans were prepared and bids received for the construction of a system of pipe sewers known as the "East Branch Lateral Sewers, Section 2." This contract was not awarded as the lowest bid was so far below the Engineer's estimate that it was not thought advisable to let the work at this price. As sewers are greatly needed in this section it is recommended that new bids be received for this work at an early date.

General plans and report were also prepared for a sewerage system for the Silver Lake District, and also for a system to drain the lower part of Woodside and provide an outlet for the Grafton Avenue sewer constructed in 1905 and which now discharges into a ditch.

Considerable preliminary work was also done in connection with a general scheme of drainage for the western section of the city adjoining and including the former Borough of Vailsburgh.

The assistants in the office remain the same as in the preceding year:

JOHN A. SCHIECK, *Engineer of Construction.*
JAMES B. BURNET, JR., *1st Assistant Engineer.*
HARRY D. FRANKLIN, *Assistant Engineer.*
GOLINE DOREMUS, *Assistant Engineer.*

Respectfully submitted,

EDWARD S. RANKIN,
Engineer Sewers and Drainage.

MONTHLY REPORT OF PRECIPITATION (RAIN AND MELTED SNOW).

AS OBSERVED AT NEWARK PUBLIC HIGH SCHOOL, BY PROF. WILLIAM WIENER, WITH U. S. GOV. RAIN GAUGE.

JANUARY, 1906 — ELEVATION OF GAUGE ABOVE SEA LEVEL, 180 FEET. — TABLE NO. 1.

Day of Month.	Begin. hr.	End hr.	Max. in 5 min. in Inches.	Beginning.	Max. in 10 min. in Inches.	Beginning.	Max. in 1 hour in Inches.	Beginning.	Am't of Rain or Melted Snow in Inches.	Depth of Snow in Inches.	Gen'l Direction of Wind.	Max. Velocity of Wind. Miles per hour.	Average Temperature.	Barometer.	Humidity.	Remarks.
1											N W	10	32.2	30.187	71	
2											N W	15	30.5	30.317	74	
3	12 00 a m	12 00 p m							1.00		N E	15	32.0	30.039	91	
4	12 00 p m	8 00 a m							.60		N	15	43.2	29.410	86	
5											S W	15	38.8	29.666	70	
6	6 00 a m	6 15 p m							*		S W	30	32.2	20.076	73	
7											S W	24	32.0	30.083	72	
8	7 20 a m	12 00 p m							0.06‡	1.50	N	20	21.2	30.083	88	
9	12 00 p m	2 45 a m							*‡	.10	N W	30	17.7	30.343	73	
10											S W	30	21.2	29.797	61	
11											W	4	26.8	30.407	73	
12	10 00 a m	2 00 p m							0.07		N W	15	39.5	30.183	96	
13	7 00 p m	12 00 p m							0.56		S W	20	32.5	30.153	81	
14	12 00 p m	11 30 p m							0.07	0.50	N E	12	33.5	30.073	92	
15	6 30 p m	12 00 p m							0.05		S E	15	34.8	30.140	95	
16	12 00 p m	11.00 a m							0.15		S W	20	41.0	29.630	84	
17											N W	20	32.5	29.916	77	
18	6 50 a m	9.00 a m							*							
	10.10 a m	11.00 a m			0.01	6.50 a m	0.08	10.10 a m	0.09*		S E	12	38.7	29.687	83	
19											N W	15	36.0	30.100	72	
20	7 10 a m	9.00 a m							0.01‡	0.2	S E	10	41.5	30.146	97	
21											S W	10	50.2	30.107	87	
22											N W	5	47.0	30.183	98	
23	7.10 p m	12.00 p m							0.11		S E	15	57.2	30.000	95	
24	1.45 a m	1.55 a m			0.02	1.45 a m			0.02		N W	30	36.0	30.347	70	
25											N	15	22.5	30.623	70	Heaviest fog seen in this vicinity.
26											N	10	28.0	30.600	77	Heavy hoar frost.
27											N W	12	38.8	30.260	65	
28	6.30 a m	6.45 a m					*	6.30 a m	*		N W	40	40.2	29.800	66	No frost in ground yet.
29											N W	24	31.0	30.163	62	Top sur. of gd. frozen.
30											S E	15	38.2	30.177	80	
31	4.30 a m	6.00 p m							*		N W	15	40.5	30.000	82	
	Total,								2.79	2.30			Av. 35.07	Av. 30.123	Av. 79.4	

* Too small to be measured

MONTHLY REPORT OF PRECIPITATION (RAIN AND MELTED SNOW).

AS OBSERVED AT NEWARK PUBLIC HIGH SCHOOL, BY PROF. WILLIAM WIENER, WITH U. S. GOV. RAIN GAUGE.

FEBRUARY, 1906. ELEVATION OF GAUGE ABOVE SEA LEVEL, 180 FEET. TABLE NO. 2.

Day of Month.	Beginning.	Ending.	Max. in 5 min. in Inches.	Beginning.	Max. in 10 min. in Inches.	Beginning.	Max. in 1 hour in Inches.	Beginning.	Am't of Rain or Melted Snow in Inches.	Depth of Snow in Inches.	Gen'l Direction of Wind.	Max. Velocity of Wind. Miles per hour.	Average Temperature.	Barometer.	Humidity.	Remarks.
1											S W	15	34.8	29.900	75	
2											N W	40	12.5	30.160	65	
3											S W	15	15.0	30.470	78	Lunar corona. Skating on Verona Lake.
4											S W	30	30.0	30.323	77	Skating in suburbs.
5	1.30 p m	2.45 p m							*		N W	30	30.2	30.170	78	Skating in suburbs.
6											N	20	8.5	30.510	69	Skating on Br. Brook.
7											N E	15	18.7	30.447	51	Lunar Eclipse, invisible because of storm.
8	8.00 p m	12.00 p m								0.70	N E	15	26.5	30.407	80	Skat'g in sub., but not in park.
9	12.00 a m	6.45 p m							0.46‡	4.20	N	40	29.8	29.943	84	
10											W	30	27.0	30.490	50	
11											N E	25	20.2	30.918	66	
12											N E	10	31.2	30.733	80	
13											N	15	41.0	30.050	80	
14	7.30 a m	9.00 a m							0.16‡	*	S W	30	43.2	29.843	76	
15											N W	35	16.2	30.127	72	
16											N W	6	24.7	30.306	60	
17	10.40 a m	3.00 p m							*‡	*	N	6	28.2	30.377	68	
18	4.00 a m	7.00 a m							*‡	*	S W	12	32.8	30.206	81	
19											W	10	39.5	30.183	80	
20											S W	20	43.7	30.257	72	
21	8.45 a m	7.30 p m							0.74		S W	30	48.0	29.883	91	All ice out of Br. Brk.
22											N W	35	40.7	30.030	72	
23											E	7	36.2	30.300	69	
24											S E	6	37.5	30.175	68	
25	12.10 a m	8.35 p m							0.41		E	9	41.8	29.876	94	
26											W	20	34.2	29.853	70	Heavy hoar frost.
27											N	45	25.5	29.853	56	½-in. frost on sur. of gr.
28											W	60	13.8	29.876	55	
	Total,---	----------							1.77	4.90			Av. 29.7	Av. 30.204	Av. 72.0	

MONTHLY REPORT OF PRECIPITATI

AS OBSERVED AT NEWARK PUBLIC HIGH SCHOOL, BY PROF. [illegible]

MARCH, 1906. ELEVATION OF GAUGE ABOVE SEA LEVEL, 180 FEET. TAB [illegible]O. 3.

Day of Month.	Beginning.	Ending.	Max. in 5 min. in Inches.	Beginning.	Max. in 10 min. in Inches.	Beginning.	Max. in 1 hour in Inches.	Beginning.	Am't of Rain or Melted Snow in Inches.	Depth of Snow in Inches.	Gen'l Direction of Wind.	Max. Velocity of Wind. Miles per hour.	Average Temperature.	Barometer.	Humidity.	Remarks.
1											W	20	28.7	30.050	57	
2											N E	7	32.5	30.210	60	Lunar corona.
3	6.52 a m	12.00 p m							2.22		N E	12	43.7	29.973	94	
4	12.00 a m	8.00 p m							0.13		W	15	45.0	29.759	78	
5											N	24	34.5	30.100	66	
6											S E	12	31.8	30.457	70	
7	5.00 p m	11.00 p m							0.01		S	15	37.5	30.140	83	
8											W	8	39.5	29.803	80	
9											N W	30	42.2	29.433	68	
10	10.00 a m	5.00 p m							*‡	*	W	30	37.8	29.633	65	Dark during heavy squalls. Blustery.
11											S W	20	40.7	30.097	64	
12	3.00 a m	5.00 a m							0.02‡		N W	30	32.0	30.143	75	
13	7.00 a m	6.00 p m							0.01‡	*	Va.	6	26.8	30.260	79	
14	12.00 p m	8.00 a m							0.08	1.00	Va.	15	28.0	30.144	80	
15	2.40 a m	8.45 p m							0.81‡	5.50	N E	30	25.2	29.903	91	Snow and sleet.
16											N W	15	31.0	29.847	69	
17											W	20	25.7	30.106	59	
18											N W	15	27.2	30.317	62	
19	10.30 a m	11.00 p m							1.26‡	7.00	N	10	29.8	30.083	87	Heaviest snow storm of this year.
20											N W	24	30.5	29.543	73	
21											S W	30	28.5	29.813	58	
22	4.30 a m 6.00 a m								*‡	*	W	18	30.0	29.937	58	
23											W	17	19.0	30.580	62	
24											N E	12	21.7	30.885	61	
25											N E	7	29.2	30.817	75	
26	6.00 a m	6.00 p m							0.13‡		N E	4	36.2	30.493	89	
27	11.00 a m	3.00 p m							0.08		S W	18	48.0	29.913	87	
28											N W	15	41.8	30.017	76	Snow practically gone.
29	9.55 p m								*		S E	8	42.5	30.113	74	
30	10.00 a m	8.00 p m							0.23		E	12	42.0	29.740	92	
31									*		N W	30	38.0	29.617	83	
	Total,----	----------							4.98	13.5			Av. 33.7	Av. 30.062	Av. 73.4	Month opened warm and ended cold.

APRIL, 1900. ELEVATION OF GAUGE ABOVE SEA LEVEL, 180 FEET. TABLE NO. 4.

Day of Month.	Beginning.	Ending.	Max. in 5 min. in Inches.	Beginning.	Max. in 10 min. in Inches.	Beginning.	Max. in 1 hour in Inches.	Beginning.	Am't of Rain or Melted Snow in Inches.	Depth of Snow in Inches.	Gen'l Direction of Wind.	Max. Velocity of Wind. Miles per hour.	Average Temperature.	Barometer.	Humidity.	Remarks.
1											N W	24	38.2	29.866	59	
2											N W	20	37.5	30.127	63	
3											N W	10	44.8	30.357	58	
4	6.35 p m	7.20 p m							0.01		S W	20	57.7	30.015	70	
5	7.00 p m	10.00 p m							0.09		S W	12	49.8	29.887	73	
6											W	40	45.7	29.850	73	High winds.
7	7.10 p m	10.30 p m							0.08		W	15	42.2	30.083	76	
8											N W	12	46.0	30.243	74	
9	8.30 a m	12.00 p m							2.90‡		E	20	42.2	30.223	94	
10	12.00 a m 5.30 p m	1.30 a m 9.00 p m							.28		N W	9	50.5	29.960	76	
11									*		N W	10	48.7	30.042	82	
12											N W	24	50.2	30.146	72	
13											S E	10	45.2	30.353	74	Signs of approaching spring on tr's & sh'bs
14											E	12	50.2	30.180	88	
15	3.30 a m	11.30 a m							1.23		W	30	52.7	29.973	84	
16											N W	12	48.0	30.200	70	
17											N W	15	55.5	30.250	57	
18											N W	5	61.0	30.250	59	San Fran. earth'e rec. on bar. & anemom't'r
19											E	6	58.5	30.156	59	
20	12.00 p m	12.15 p m							*		S E	10	59.2	29.980	69	Spring flowers app'r'd.
21	8.30 p m	9.15 p m							0.01		S W	25	66.0	29.847	67	
22											W	25	55.0	29.823	65	
23	7.20 a m	8.00 p m							0.93		N W	30	40.7	29.677	89	
24											N W	30	46.0	29.683	51	
25											N W	35	50.5	29.547	34	
26											W	20	56.0	29.677	78	
27											S W	20	59.5	29.666	74	
28											N W	15	57.0	29.833	59	
29	4.10 p m	4.12 p m							*		N E	10	54.5	30.138	72	
30	4.00 a m	8.00 a m							0.15		S	18	64.0	29.996	76	
	Total,---	----------							5.68				Av. 50.11	Av. 30.001	Av. 69.8	

MONTHLY REPORT OF PRECIPITATION (RAIN AND MELTED SNOW).

AS OBSERVED AT NEWARK PUBLIC HIGH SCHOOL, BY PROF. WILLIAM WIENER, WITH U. S. GOV. RAIN GAUGE.

MAY, 1906. ELEVATION OF GAUGE ABOVE SEA LEVEL, 180 FEET. TABLE NO. 5.

Day of Month.	Beginning.	Ending.	Max. in 5 min. in Inches.	Beginning.	Max. in 10 min. in Inches.	Beginning.	Max. in 1 hour in Inches.	Beginning.	Am't of Rain or Melted Snow in Inches.	Depth of Snow in Inches.	Gen'l Direction of Wind.	Max. Velocity of Wind. Miles per hour.	Average Temperature.	Barometer.	Humidity.	Remarks.
1											N W	20	60.5	30.006	59	
	6.30 a m	8.40 a m							.02							
2	2.00 p m	7.00 p m							.03		S E	12	59.5	29.783	80	Thunder & lightning.
	9.10 p m	12.00 p m							.03							
3											W	30	58.5	29.740	62	
4											E	10	56.7	29.843	72	
	1.40 p m								*		N	10	60.0	29.766	85	Few drops of rain at
5	2.10 p m															these hours.
	3.15 p m								0.20		N W	5	58.5	29.840	70	
6	4.30 p m	9.00 p m							0.08		N	8	57.0	29.950	80	
7	3.00 a m	6.00 a m									S E	12	54.5	30.167	64	
8									0.24		S	10	48.5	30.003	74	
9	6.00 a m	12.00 p m							*		W	15	46.5	30.033	74	
10	2.45 a m	3.40 a m					.05	6.16 p m	0.05		S W	20	48.8	30.200	70	
11	6.16 p m	6.46 p m							0.01		S W	25	62.7	30.163	77	
12	12.31 a m		0.01								W	30	72.7	30.093	69	
13									0.30		E	12	50.5	30.210	98	
14	12.33 a m	3.40 p m									E	10	56.8	30.350	71	
15											S W	35	75.2	30.116	67	
16									0.42		S E	30	71.7	30.006	84	Heaviest thunder
17	5.00 p m	12.00 p m														shower of the year.
	12.00 a m	2.30 a m							0.23		S W	15	78.0	29.850	84	Max. tem. of day 91° F.
18	4.30 a m	5.30 a m									N W	12	72.2	29.740	78	
19											W	24	60.0	29.920	81	
20											N E	10	53.5	30.156	80	
21											S E	12	54.7	30.223	85	
22											E	12	61.0	30.146	77	
23											S W	20	73.0	30.023	68	
24											S W	20	73.2	29.936	74	
25											S W	15	72.2	29.833	81	
26																
	10.00 a m	5.25 p m														
27	6.10 p m	11.30 p m							1.77		S E	20	66.5	29.676	98	2 heavy thund'r show's
	12.00 a m	6.45 a m														
28	12.29 p m	12 m							0.19		N	20	50.0	29.636	90	
	12.00 a m	12.05 a m	0.20						0.20		N W	15	56.5	29.570	73	
29											S W	12	60.5	30.033	73	
30									*		[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	Aurora borealis.

MONTHLY REPORT OF PRECIPITATION (RAIN AND MELTED SNOW).

AS OBSERVED AT NEWARK PUBLIC HIGH SCHOOL, BY PROF. WILLIAM WIENER, WITH U. S. GOV. RAIN GAUGE.

JUNE, 1906. ELEVATION OF GAUGE ABOVE SEA LEVEL, 180 FEET. TABLE NO. 6.

Day of Month.	Beginning.	Ending.	Max. in 5 min. in Inches.	Beginning.	Max. in 10 min. in Inches.	Beginning.	Max. in 1 hour in Inches.	Beginning.	Am't of Rain or Melted Snow in Inches.	Depth of Snow in Inches.	Gen'l Direction of Wind.	Max. Velocity of Wind. Miles per hour.	Average Temperature.	Barometer.	Humidity.	Remarks.
1	12.30 a m								* * *		S W	15	71.5	29.88	78	
2	9.40 p m								*		S	20	75.2	29.99	72	Slight thunder shower.
3	5.30 p m										N W	20	69.7	30.046	66	
4											S W	20	71.7	30.173	69	Lunar halo.
5	8.00 p m	9.15 p m							*		S W	20	75.5	30.04	83	
6	7.20 p m	9.15 p m							.35		S W	24	74.1	29.84	81	Thunder shower.
7											S E	10	66.2	29.98	81	
8	8 a m								*		S E	4	60.5	30.093	93	
	8.35 a m															
9	5.30 a m	6.00 a m					.09	5.30 a m	.09			12	75.0	29.963	82	Damaging thunderst'm
	5.50 p m	6.10 p m					*	5.50 p m	*		W					
10	5.30 p m	6.30 p m					.015	5.30 p m	.01		S W	40	73.7	29.85	73	
11											N W	12	68.3	30.033	78	
12											N E	10	61.8	30.25	57	
13											S E	12	62.5	30.336	78.3	
14											S	15	69.7	30.176	72	Somewhat hazy.
15											S W	15	76.5	30.017	78	
16	1.45 a m	1.55 a m			.5	1.45 a m			.50		N E	13	64.5	30.003	98	
17	12.05 a m	4.00 a m							.19		N E	12	73.7	29.986	90.6	
18	12.25 a m	9.00 a m							.15		N E	20	63.2	29.96	100	
19	12.10 a m	6.30 a m							.38		N	15	65.7	29.89	96	
20											N E	7	69.0	29.94	77	
21	9.30 p m	9.35 p m	.01						.01		N W	8	68.8	29.92	89	
22	Showers	Showers							*		S W	20	71.2	29.80	82	
23	Showers	Showers							.16		S W	12	74.7	29.84	73	Thunder storm.
24											N W	10	69.8	29.93	74	
25											N W	12	70.5	29.99	71	
26											E	12	71.6	30.06	79	
27											W	15	77.2	30.01	68	
28											N W	5	79.2	30.03	64.5	
29	6.30 a m	7.30 a m					.75	6.30 a m	.75		N W	12	80.5	29.89	80	Thunder & hail storm.
30	6.00 a m	7.00 a m					.01	6.00 a m								
	8.00 p m	8.30 p m					.02	8.00 p m	.03		W	20	73.7	29.84	81	
	Total,---	----------							2.62				Av. 70.8	Av. 29.992	Av. 78.8	

MONTHLY REPORT OF PRECIPITATI(

AS OBSERVED AT NEWARK PUBLIC HIGH SCHOOL, BY PROF. \

1, 1906. ELEVATION OF GAUGE ABOVE SEA

Day of Month.	Beginning.	Ending.	Max. in 5 min. in Inches.	Beginning.	Max. in 10 min. in Inches.	Beginning.	Max. in 1 hour in Inches.	Beginning.	Am't of Rain or Melt... in	Depth in	Gen'l of	Max. of Miles	Average Temperature	Barometer.	Humidity	Remarks.
1											N E	12	70.7	29.91	75	Lunar halo.
2											S E	10	77.0	29.89	79	
3	9.40 p m	11.10 p m							1.24		S E	20	73.0	29.80	93	Thunderstorm.
	12.10 a m	4.00 a m														
4	Showers								*		S W	22	76.0	29.77	82	
5											S E	12	64.2	30.00	76	
6											N E	24	67.0	30.24	80	
7											N E	10	68.2	30.14	82	
8	Showers								.02		S E	10	72.0	30.05	84	
9	4.00 a m	6.00 a m							.02							
	4.30 p m	6.00 p m							.10		S W	16	70.0	29.87	80	Heavy thunderstorm.
10	4.00 p m	5.00 p m					.56	4.00 p m	.56		S W	50	72.5	29.85	91	D'k abt. 3.50 P M. Lge. hail sts., th'r & lig'g.
11											N E	10	72.7	30.03	88	
12											W	6	71.7	30.17	81	
13											S E	12	71.7	30.19	81	
14											S	10	75.5	30.10	74	
15	Occasional Showers during p m								*		S W	10	74.5	30.08	78	
16	8.30 a m								.04		S E	10	76.0	30.03	81	
17	12.30 p m	1.00 p m							.07			15	77.3	29.92	79	Very severe and spectacular light'g storm
	Showers								.07		S W					
18											W	7	77.5	30.08	84	
19											W	7½	74.7	30.19	76	
20											S E	10	73.5	30.15	88	
21	9.40 a m	Showers all day through p m							.41		S E	15	76.5	29.93	81	
22	Occasional showers during p m								*		S E	20	77.2	29.79	79	
23											S E	15	77.0	29.88	86	
24											N W	10	68.7	30.00	85	
25											N E	12	72.0	30.08	78	
26											N E	15	68.7	30.10	72	
27	At dif. hrs.								*		E	12	70.7	30.10	73	Spray showers.
28	8.30 p m	11.00 p m							.07		S W	20	73.2	30.04	85	
29	Showers								.15		S W	20	74.7	29.95	93	
30	Showers								*		S W	20	74.5	29.72	85	
31											S	10	79.0	29.93	76	
	Total,								3.71				Av. 73.2	Av. 30.005	Av. 81.4	

BOARD OF STREET AND WATER COMMISSIONERS

AS OBSERVED AT NEWARK PUBLIC HIGH SCHOOL, BY PROF. WILLIAM WIENER, WITH U. S. GOV. RAIN GAUGE.

AUGUST, 1906. ELEVATION OF GAUGE ABOVE SEA LEVEL, 180 FEET. TABLE NO.8.

Day of Month.	Beginning.	Ending.	Max. in 5 min. in Inches.	Beginning.	Max. in 10 min. in Inches.	Beginning.	Max. in 1 hour in Inches.	Beginning.	Am't of Rain or Melted Snow in Inches	Depth of Snow in Inches.	Gen'l Direction of Wind.	Max. Velocity of Wind. Miles per hour.	Average Temperature.	Barometer.	Humidity.	Remarks.
1											N	10	72.5	30.146	87.6	Dark day.
2	4.00 a m	12.00 m							1.40		N E	12	69.0	30.22	100.0	
3	7.00 a m	12.00 p m							.06		N E	4	72.2	30.16	95.3	Gentle rain.
4	4.50 p m	5.10 p m							.07		S W	12	81.5	30.045	78.0	Thunder storm.
5											S E	7½	79.8	30.05	75.0	Lunar corona.
6											W	15	82.0	30.05	63.0	Hottest day of year.
7	6.15 p m 10.15 p m	7.00 p m 11.00 p m					.44 .04	6.15 p m 10.15 p m	48		N W	30	78.5	30.03	74.0	Thunder storm and vivid electri'l display
8	4.00 p m	5.30 p m							.02		N	10	74.2	29.95	87.0	
9											S E	20	75.2	30.00	82.6	
10	9.00 a m	11.00 a m							.01		N E	6	69.2	29.96	93.3	
11	7.10 a m	7.30 a m					.07	7.10 a m	.07		S	20	76.9	29.89	92.0	
12	3.00 a m	4.00 a m					.03	3.00 a m	.03		N W	15	77.2	30.01	64.6	
13											N	16	69.0	30.14	68.6	
14											W	12	74.0	29.92	65.6	
15											N W	10	74.3	29.95	68.3	
16											N	6	72.7	30.06	60.6	
17											S E	12	71.0	30.18	77.0	
18											S E	10	74.5	30.23	82.6	
19											S W	10	79.3	30.22	75.3	
20	5.00 a m	6.00 a m					.022	5.00 a m	02		S W	15	75.0	30.145	81.0	
21	12.05 p m	3.30 p m							.06		S	9	74.3	30.02	94.0	Thunder storm.
22											S	12	77.7	29.96	84.6	
23	10.30 p m	11.30 p m					.23	10.30 p m	.23		S W	15	80.0	29.94	80.3	Spectacular lightning during thunderstorm
24	Showers at different hours.								*		N E	24	65.0	30.15	93.0	
25											N E	10	66.7	30.263	76.0	
26											N E	C'm	73.2	30.16	79.0	
27	Showers								.07		S W	20	76.7	29.92	92.6	
28											N W	12	70.7	30.07	79.0	
29	8.50 a m	9.30 a m							*		S	12	70.5	30.11	86.0	
30											S W	20	78.5	30.04	81.0	Lunar halo.
31											N W	20	72.5	30.03	68.3	Lunar halo.
	Total,								2.52				Av. 74.32	Av. 30.065	Av. 80.19	

MONTHLY REPORT OF PRECIPITATION (RAIN AND MELTED SNOW).

AS OBSERVED AT NEWARK PUBLIC HIGH SCHOOL, BY PROF. WILLIAM WIENER, WITH U. S. GOV. RAIN GAUGE.

SEPTEMBER, 1906. ELEVATION OF GAUGE ABOVE SEA LEVEL, 180 FEET. TABLE NO. 9.

Day of Month.	Beginning.	Ending.	Max. in 5 min. in Inches.	Beginning.	Max. in 10 min. in Inches.	Beginning.	Max. in 1 hour in Inches.	Beginning.	Am't of Rain or Melted Snow in Inches.	Depth of Snow in Inches.	Gen'l Direction of Wind.	Max. Velocity of Wind. Miles per hour.	Average Temperature.	Barometer.	Humidity.	Remarks.
1											W	12	62.6	30.148	75.0	Lunar halo.
2	2.45 a m	4.00 a m							.07		S	20	67.7	30.116	72.0	
3	10.00 a m	10.30 a m					.01	10.00 a m			W	30	70.7	29.76	80.0	
4											N W	30	62.5	30.05	72.6	
5											S E	10	62.7	30.25	67.3	Lunar halo.
6											S W	15	69.7	30.11	76.3	
7											S W	10	75.5	29.95	75.0	
8											S E	8½	68.2	29.93	78.0	
9											S W	15	75.5	29.88	78.6	
10											N W	24	78.0	29.88	72.0	
11											E	15	72.7	30.05	84.3	
12	5.40 a m	6.30 a m					.1	5.40 a m	1.48		N	20	75.8	30.02	86.6	Thunder storms.
	1.00 p m	9.00 p m					.5	3.00 p m								
	4.30 a m	5.00 a m					.0	4.30 a m	.06		S	20	74.5	29.88	95.3	Thunder storms.
13	10.15 a m	11.00 a m					.0	10.15 a m								
14											N	20	70.0	29.99	71.3	
15											N	20	63.2	30.28	77.3	Very windy.
16											N E	24	60.5	30.32	75.3	
17											S	7	66.0	30.20	80.6	
18											S W	15	74.1	30.07	76.6	Heavy fog early A. M.
19											S W	12	79.2	30.003	75.0	
20	11.00 a m	2.00 p m							.04		S W	15	77.0	29.97	95.3	
21											W	20	77.2	29.93	77.0	
22	12.10 p m	5.30 p m							1.37		N E	12	66.7	29.98	97.0	Very dark day. Th. st.
23											N W	20	69.7	29.91	90.3	
24											N W	12	57.6	30.28	64.3	
25											S E	10	55.2	30.46	72.6	
26											S E	15	62.7	30.40	85.3	
27	5.00 a m	9.30 a m							.23		S W	15	63.7	30.27	90.0	
28											N	10	61.7	30.39	71.0	
29	10.00 a m	11.00 a m					.03	10.00 a m	.03		S E	10	65.0	30.26	87.0	
30	6.15 a m	9.15 a m							.25		N E	20	62.5	30.05	85.6	Lunar halo.
Total									3.53				Av. 68.27	Av. 30.003	Av. 79.68	

AN OBSERVED AT NEWARK PUBLIC HIGH SCHOOL, BY PROF. WILLIAM WIENER, WITH U. S. GOV. RAIN GAUGE.

OCTOBER, 1906. ELEVATION OF GAUGE ABOVE SEA LEVEL, 180 FEET. TABLE NO. 10.

Day of Month.	Beginning.	Ending.	Max. in 5 min. in Inches.	Beginning.	Max. in 10 min. in Inches.	Beginning.	Max. in 1 hour in Inches.	Beginning.	Am't of Rain or Melted Snow in Inches.	Depth of Snow in Inches.	Gen'l Direction of Wind.	Max. Velocity of Wind. Miles per hour.	Average Temperature.	Barometer.	Humidity.	Remarks.
1											E	20	54.0	30.12	77.3	
2	12.00 p m	6.00 a m							.13		N E	8	58.5	30.016	87.6	
3											N E	7½	50.5	30.01	80.3	
4											N E	20	62.5	29.97	89.3	
5	3.00 a m	8.00 a m							.53		N W	20	64.5	29.70	92.6	
6	5.00 a m	5.45 a m					.03	5.00 a m			S E	30	60.5	29.49	83.3	High winds.
7	11.30 a m	12.15 a m						11.30 a m			W	45	50.7	29.816	79.6	High winds.
8											S E	45	50.0	30.13	63.3	
9	12.30 p m	1.00 p m					.04	12.30 p m	.45		S	45	59.2	29.87	80.3	Lightning & thunder.
	2.30 p m	12.00 a m														
10											W	15	48.5	29.74	75.6	
11											S W	20	41.2	29.90	72.0	
12											N W	20	43.2	30.27	63.6	Light frost early A. M.
13											N W	30	43.2	30.46	60.6	
14											N E	20	48.0	30.43	78.0	
15											N E	20	58.7	30.35	68.0	
16	11.45 a m	11.50 a m							•		N E	20	59.2	30.32	61.3	
17											N E	15	52.7	30.42	76.0	
18	12.50 a m	2.00 p m							•		N E	15	57.5	30.30	88.0	Showers.
	7.00 p m	8.30 p m							.06							
19	7.00 a m	9.00 a m							1.50		N E	15	66.3	30.08	86.3	Thunder storm.
	11.00 p m	6.15 a m							.03							
20	9.00 a m	12 noon							.09		N	12	61.7	30.105	89.3	Thunder storm.
	6.00 p m	8.10 p m							.06		N					
	4.50 p m	6.30 p m							.49		N	15	55.2	30.26	94.0	
21	1.20 a m	12 noon							.15		N					
	12.50 p m	3.00 p m							.03		N E					
22	9.00 a m	12.00 noon							.09		N E	15	55.8	30.25	92.0	
	6.00 p m	8.10 p m														
23											S W	5	63.0	30.13	84.6	
24	5.25 p m	8.30 p m							.03		N E	8	56.0	30.16	86.3	
25	2.15 a m	6.55 a m							.22		W	6	62.0	29.90	63.0	
26											W	6	52.7	30.07	72.6	
27											S E	20	54.0	29.85	86.0	
28											S W	20	48.0	29.75	76.3	
29											W	20	41.2	30.05	67.0	
30											N	15	47.2	30.08	72.0	
31	12.15 p m	5.25 p m							.46		N	20	40.2	30.12	88.0	Ice and frost.
	Total,								4.23				Av. 54.03	Av. 30.068	Av. 78.52	

MONTHLY REPORT OF PRECIPITATION (RAIN AND MELTED SNOW).

AS OBSERVED AT NEWARK PUBLIC HIGH SCHOOL, BY PROF. WILLIAM WIENER, WITH U. S. GOV. RAIN GAUGE.

NOVEMBER, 1906. ELEVATION OF GAUGE ABOVE SEA LEVEL, 180 FEET. TABLE NO. 11.

Day of Month.	Beginning.	Ending.	Max. in 5 min. in Inches.	Beginning.	Max. in 10 min. in Inches.	Beginning.	Max. in 1 hour in Inches.	Beginning.	Am't of Rain or Melted Snow in Inches.	Depth of Snow in Inches.	Gen'l Direction of Wind.	Max. Velocity of Wind, Miles per Hour.	Average Temperature.	Barometer.	Humidity.	Remarks.
1											N W	35	38.5	30.25	56.6	High wds. Lunar halo.
2											N W	30	47.2	30.14	52.3	Lunar halo.
3											N W	20	50.5	30.29	68.3	Lunar halo.
4											N W	10	44.5	30.34	67.6	Lunar halo Au. Bor's.
5											N W	10	44.0	30.19	66.6	Lunar halo.
6											N W	20	48.5	30.08	54.6	High winds.
7											N W	20	44.5	30.06	52.3	High winds.
8											N	7½	40.2	30.14	61.3	
9											S E	10	44.7	30.09	68.3	Hoar frost.
10											N W	15	50.0	29.95	74.3	
11	6.15 a m	6.15 p m							.54		W	20	42.5	29.68	95.0	
12	10.00 a m 4.00 p m	11.00 p m						10.00 a m 4.00 p m	.01 *	* *	W	15	39.7	29.61	80.0	Snow flurries.
13	12 noon 7.00 p m						.01		*	*	W	15	36.2	29.68	69.0	Snow flurries.
14											N W	15	35.7	29.82	67.6	
15	7.00 a m	1.00 p m							.42	4.25	N	20	32.5	29.82	84.5	Not a lasting snow.
16	12.00 a m	5.00 a m							.16		W	20	38.0	29.76	62.0	Snow, sleet and rain.
17											S W	7	40.0	29.98	72.0	
18	10.05 p m	12.00 a m							.06		S E	18	58.7	29.96	84.6	
19	12.00 a m	6.40 a m							.06		W	15	58.7	30.12	76.0	Meteoric showers.
20											W	6	52.5	30.09	77.3	
21	9.00 a m	9.00 p m							.03		N W	15	45.7	29.97	91.6	
22											W	20	48.2	29.91	68.0	High winds.
23											N W	20	41.7	30.16	66.0	High winds.
24											W	20	40.2	30.173	68.6	
25											W	20	44.0	30.21	70.6	Lunar halo.
26											S W	15	49.0	30.20	65.3	Lunar halo.
27											W	20	47.0	30.07	64.0	
28	12.10 p m 5.30 p m	12.15 p m 6.00 p m						5.30 p m	*		N W	25	40.7	30.05	75.0	High w'ds. Lunar halo.
29											N W	25	29.7	30.28	72.6	High winds.
30											S W	20	39.5	30.23	65.6	
	Total,...	----------							1.37	4.25			Av. 43.7	Av. 30.04	Av. 69.8	

MONTHLY REPORT OF PRECIPITATION (RAIN AND MELTED SNOW).

AS OBSERVED AT NEWARK PUBLIC HIGH SCHOOL, BY PROF. WILLIAM WIENER, WITH U. S. GOV. RAIN GAUGE.

DECEMBER, 1906. ELEVATION OF GAUGE ABOVE SEA LEVEL, 180 FEET. TABLE NO. 12.

Day of Month.	Beginning.	Ending.	Max. in 5 min. in Inches.	Beginning.	Max. in 10 min. in Inches.	Beginning.	Max. in 1 hour in Inches.	Beginning.	Am't of Rain or Melted Snow in Inches.	Depth of Snow in Inches.	Gen'l Direction of Wind.	Max. Velocity of Wind. Miles per hour.	Average Temperature.	Barometer.	Humidity.	Remarks.
1	2.00 p m	2.30 p m								*	W	20	42.7	29.96	70.3	Snow flurry.
	7.00 p m	7.10 p m														
2											W	25	27.2	30.06	73.3	High winds.
3	7.00 a m	12.00 p m							.05	.50						
	5.00 p m	6.00 p m								*	N W	40	35.3	29.79	74.6	High winds.
4											N W	30	18.1	30.15	65.6	Ice on Br. Brook. 1.25
5	10.30 p m	12.00 a m							.05		S W	15	35.2	30.10	67.6	inches thick.
6	12.00 a m	12.00 noon			.05	8.35 a m	.1	8.30 a m	.45	*	S W	20	50.2	29.69	95.6	Snow turned into rain.
7											N W	40	22.0	30.04	62.6	High winds.
8											W	40	17.0	30.34	75.0	High winds.
9	12.00 a m	12.00 p m							.20		N E	10	26.7	30.36	81.0	Snow, sleet and rain.
10	12.00 a m	11.00 p m			.03	1.15 p m	.10	11.00 a m	.81		N W	7½	32.2	30.29	100	Sleet and rain.
11											N W	30	26.1	30 29	74.0	Winds early A. M.
12											N	15	25.2	30.29	76.6	
13											S W	8	39.2	29.99	79.0	
14	11.00 p m	12.00 p m					.01	11.00 p m	.01		N E	15	35.0	30.25	83.3	
15	12.00 p m	2.15 p m							.04		S W	20	50.2	30.01	87.0	
16	11.00 a m	12.00 p m							.15	*	S W	12	36.7	30.15	93.9	
17	12.00 p m	9.00 a m							.39		N W	4	33.5	30.11	98.3	Snow turned into rain.
	9.00 a m	4.20 p m														
18											N W	20	21.7	30.42	68.3	
19	11.00 p m	12.00 p m					.05	11.00 p m	.05	.5	N W	10	20.7	30.57	80.0	Snow and rain.
20	12.00 p m	12.00 noon														
	12.00 noon	12.00 p m			.03	10.15 a m	18	10.30 a m	.98	*	N E	20	37.0	30.04	93.3	Snow and rain.
21	12.00 p m	9.05 a m					.07	12.30 a m	.45		W	12	39.7	29.82	84.0	
22	1.15 a m	1.45 a m					.04	1.15 a m	.04		N W	20	39.5	29.86	87.0	High winds.
23											N W	20	17.7	30.00	68.0	High winds.
24											N W	30	10.0	30.06	69.6	High winds.
25											N W	35	20.7	29.84	80.6	High winds.
26											N W	20	33.7	29.92	85.3	
27	5.00 p m	9.00 p m							.01	1	S W	15	32.5	29.97	85.3	Skating on Br. Brook.
28	6.50 a m	7.15 a m					.01	6.50 a m	.01		N W	3	38.0	30.01	82.0	Heavy fog.
29											N	2	40	30.18	90.0	Heavy fog.
30	11.30 a m	12.00 p m					.25	11.30 a m	.25		N E	15	39.7	30.30	95.0	
31	12.00 p m	9.30 p m	.18	11.50 a m	.30	11.50 a m	.81	11.10 a m	2.23		S E	15	48.5	30.08	93.0	
	Total,								6.17	.50			Av. 31.9	Av. 30.43	Av. 80.93	

of Soil.	Contractor.	Remarks.

pr.	Statement No.	Remarks.	Date.
Halsey pdley		John H. Francisco, Eng'r	January, 1906
Chadw			February, 1906
Jellif mber Co.	269		March, 1906
Earl ard	268		April, 1906
Scheer			
Elisab			
Weeqa		House connections laid to curb	
Weeqa		House connections laid to curb	
Custer L. & I. Co.			April, 1906
South		Storm water only. Paid for out of Sewers and Drainage account	April, 1906
Woods		John H. Francisco, Eng'r	May, 1906
Hawth			
Belmo			
Hillsid			
Johnso			
Ridgev			
Mart Imp. Co.			July, 1906
Highla Imp. Co.		H. Van Duyne & Son, Eng'rs	August, 1906
Highla Imp. Co.		H. Van Duyne & Son, Eng'rs	August, 1906
S. Sev		1 lamp hole	August, 1906
Howar o.			September, 1906
Eighte nbe			September, 1906
Victor		1 special basin	September, 1906
Berges L. & I. Co.			October, 1906
Cortlan	271		October, 1906
White		House connections laid to curb	October, 1906
Newbe Co.	270	1 lamp hole	October, 1906
South			October, 1906
Court			November, 1906
Park led Child'n			November, 1906
Eighte			December, 1906
Highla Imp. Co.		H. Van Duyne & Son, Eng'rs. House connections laid to curb	October, 1906
Parke Imp. Co.		H. Van Duyne & Son, Eng'rs	October, 1906
S. Th		J. H. Francisco, Eng'r. House connections laid to within 5 ft of st. lines.	December, 1906
Grant		Paid for out of Sewers & Drainage ac't	June, 1906

Murra		House sewage only.
Broad		
Murra		
Austin	James A. Christie	
Emme		
S. Tw	D'Amato & Stefanelli	House connections laid to curb.
Libert	D'Amato & Stefanelli	House connections laid to curb.
Chesti clay	James A. Christie	House connections laid to curb.
		291 cubic yards excavation for ditch.
Lyons		Concrete sewer.
		Concrete blocks.
ll of boulders	James A. Christie	
East		Brick and concrete.
cep		Brick and concrete.
ter	Wm. J. McCloud & Co.	Underdrain. Not completed.
Sixteen		Built on bottom boards.
lief	James A. Christie	Built on bottom boards. Not completed.

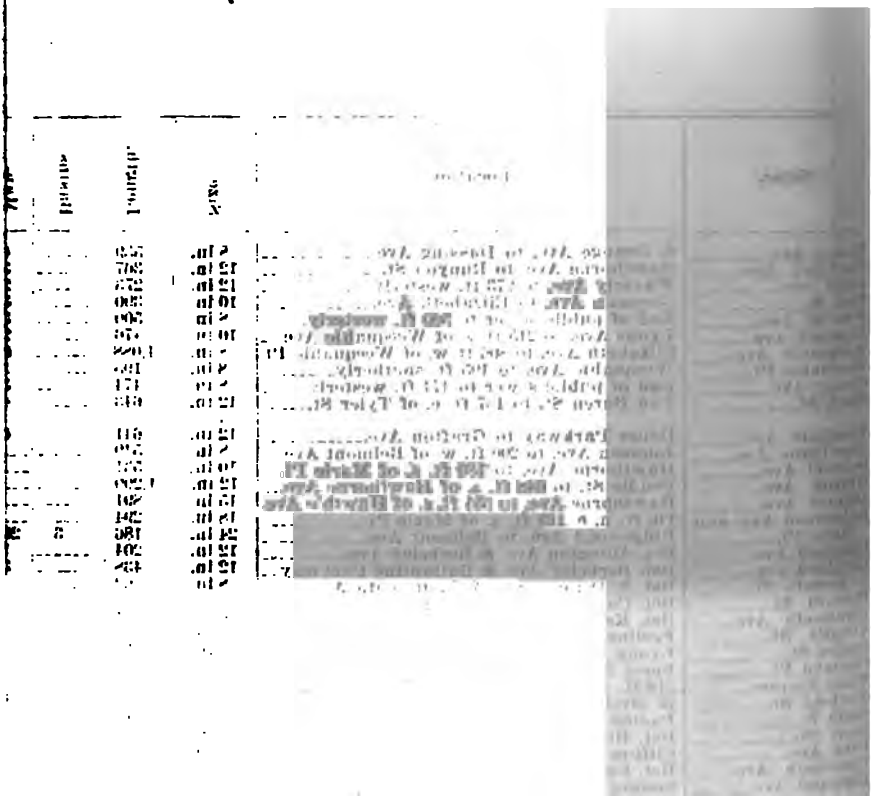

TABLE SHOWING NUMBER, LENGTH AND COST OF ALL 6-INCH HOUSE CONNECTIONS LAID BY THE CITY. UNDER THE PROVISIONS OF CHAPTER 107 OF THE STATE LAWS OF 1896.

SECTION 1. Provides for laying connections as sewers are built, the [illegible] of which [illegible]

Adams St.	Between Elm St. and New York Ave.	19	276	.35	96.60	1
New York Ave.	Tenth Ward Ditch to McWhorter St.	17	408	.33	134.64	1
Bryant St.	Summer Ave. to Lincoln Ave.	38	608	.35	212.80	1
Central Ave. and S. Eighteenth St. and Branches		238	3,822	.37	1,414.14	1
South Twelfth St.	Between Springfield Ave. and Woodland Ave.	28	448	.33	168.84	1
Liberty St.	Green St. to Lafayette St.	19	284	.36	126.99	1
Hedden St.	Between Clinton Ave. and Runyon St.	21	360	.34	122.40	2
Ingraham Pl.	Between Clinton Ave. and Millington Ave.	7 5	112 80	.34 .40	70.08	2
Nairn Pl.	Between Clinton Ave. and Millington Ave.	5	80	.34	35.23	2
Crittenden St.	Belleville Ave. to 420′ westerly	2	27	.34	11.88	2
Campbell St.	Between Washington St. and Plane St.	5	45	.32	14.40	2
William St.	Between Washington St. and High St.	2 5	26 81	.32 .34	59.11	2
Hillside Ave.	Between Alpine St. and Bigelow St.	15	336	.34	128.19	2
Beach St.	Between Mulberry St. and Orchard St.	3	38	.32	12.16	2
Summit Pl.	Between Lock St. and Summit St.	5 3 3	35 36 34	.30 .32 .34	51.18	2
Summer Pl.	Between May St. and Chester Ave.	13	208	.32	66.56	2
Carteret St.	Between Washington Ave. and Summer Ave.	21	336	.34	130.34	2
Millington Ave.	Between Clinton Pl. and Van Ness Pl.	2 19	36 342	.40 .34	145.53	2
Bigelow St.	Between Hillside Ave. and Badger Ave.	7 4	134 88	.34 .40	105.76	2
South Seventeenth St.	Between Springfield Ave. and Clinton Ave.	67	1,264	.34	461.56	2
Littleton Ave.	Between Springfield Ave. and Sixteenth Ave.	9	210	.34	77.40	2
North Eleventh St.	Between Sixth Ave. and Newbold St.	37 4	820 80	.32 .40	297.90	2
Garels St.	Between Blum St. and S. Tenth St.	1	12	.32	3.84	2
Hamilton St.	Between Mulberry St. and Union St.	3	50	.32	19.60	2
Adams St.	Between Market St. and Chestnut St.	11 27 4	66 452 74	.30 .32 .34	212.30	2
Jelliff Ave.	Between Avon Ave. and Bigelow St.	5 26	92 472	.32 .34	193.52	2
Central Ave.	Between High St. and Third St.	48 8	930 98	.34 .32	480.31	2
Chestnut St.	Pacific St. to Jefferson St.	32 1	320 10	.33 .60	150.55	1
Niagara St.	Between Ferry St. and Berlin St.	32	510	.35	204.35	2
Total		851	14,066		$5,340.91	
Grand Total		2,515	43,293		$15,343.26	

ANNUAL REPORT

OF THE

Board of Street and Water Commissioners

OF THE CITY OF
NEWARK, N. J.

FOR THE YEAR
1907

The Essex Press

Gloucester, Massachusetts

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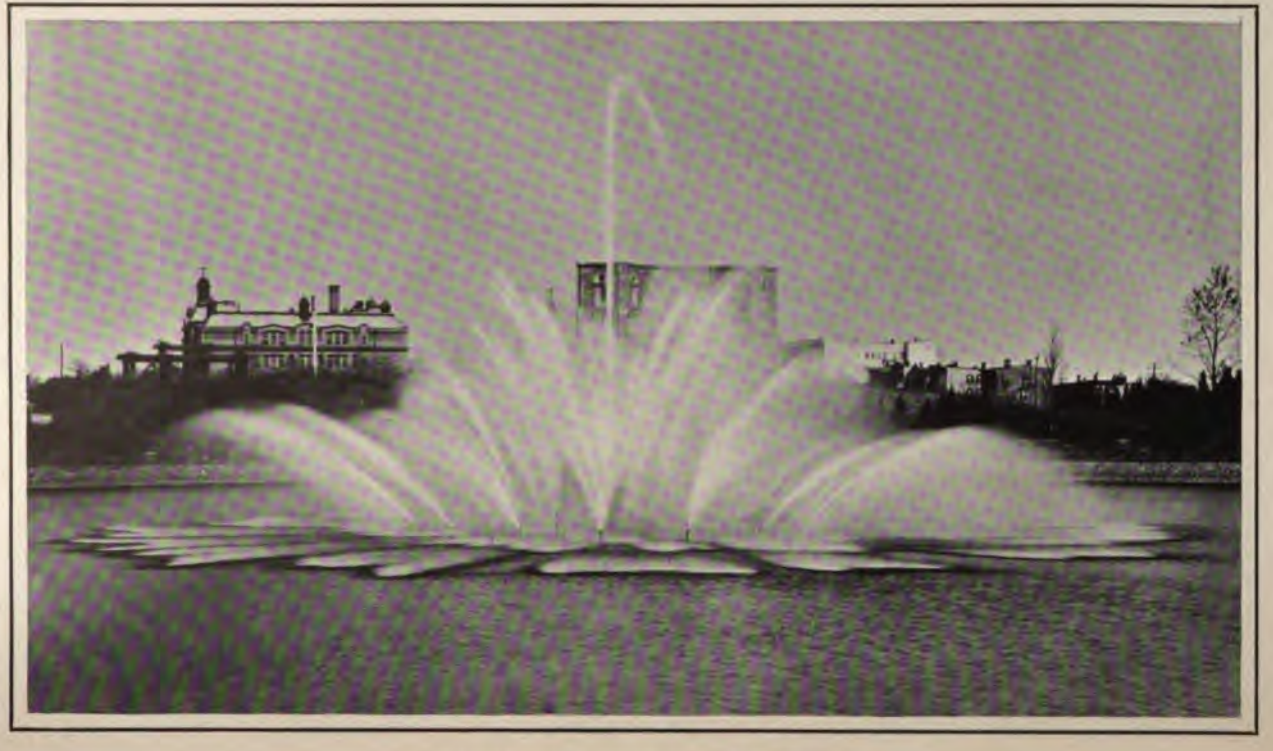

CLIFTON AVENUE RESERVOIR—SHOWING FOUNTAIN.
Capacity 16,500,000 gallons. Elevation 109 feet.

ANNUAL REPORT

OF THE

Board of Street and Water Commissioners

OF THE

CITY OF NEWARK, NEW JERSEY

FOR THE YEAR ENDED DECEMBER 31, 1907

The Essex Press

Newark, New Jersey

OFFICERS AND MEMBERS

PRESIDENT.....ARTHUR R. DENMAN, 40 Park Pl.
CITY COUNSEL.....JAMES R. NUGENT, 47 Hill St.
CLERK OF THE BOARD.....WM. E. GREATHEAD, 24 Milford Ave.
ASST. CLERK OF THE BOARD.....ALFRED L. SWAIN, 734 Lake St.
CHIEF ENGINEER.....MORRIS R. SHERRERD, 938 Broad St.
SECRETARY TO CHIEF ENGINEER..JOS. G. WOLBER, 18 Vermont Ave.
GENERAL SUP'T OF WORKS..CHAS. M. SHIPMAN, 106 Lincoln Ave.
ENGINEER AND SUP'T DEP'T OF WATER GEORGE SANZENBACHER, 276 South 6th St.
ENGINEER, DEP'T OF STREET & HIGHWAYS *LOUIS C. DITTLER, 130 Seymour Ave. †WM. A. HOWELL, 684 Parker St.
ENGINEER, DEP'T OF SEWERS & DRAINAGE EDWARD S. RANKIN, 751 High St.
CASHIER, DEP'T OF WATER..H. D. NORTHROP, 28 Waverly Ave.

COMMISSIONERS	RESIDENCE.
ARTHUR R. DENMAN	40 Park Pl.
FRANK J. BOCK	10 Renner Ave.
AUGUSTUS F. EGGERS	21 South 10th St.
THOMAS F. HALPIN	412 Lafayette St.
GEORGE H. LAMBERT	54 North Seventh St.

*Died August 2nd, 1907.
†Appointed August 15th, 1907.

To the Honorable the Mayor and Common Council of the City of Newark, N. J.:

Pursuant to law, the Board of Street and Water Commissioners of the City of Newark, N. J., hereby presents its annual report, showing the condition of the public works and property of the City under the government, control and management of said Board, for the fiscal year ended December 31st, 1907.

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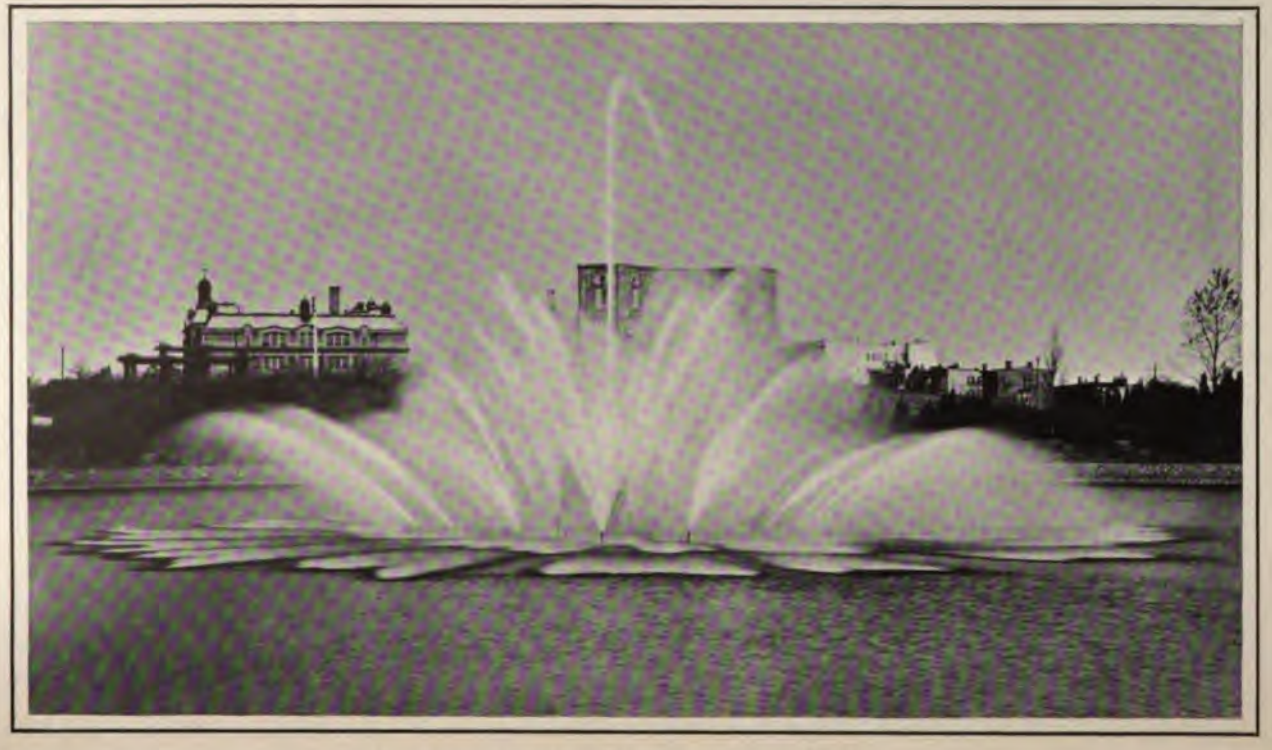


CLIFTON AVENUE RESERVOIR—SHOWING FOUNTAIN.
Capacity 16,500,000 gallons. Elevation 109 feet.

ANNUAL REPORT

OF THE

Board of Street and Water Commissioners

OF THE

CITY OF NEWARK, NEW JERSEY

FOR THE YEAR ENDED DECEMBER 31, 1907

ANNUAL REPORT

OF THE

GENERAL SUPERINTENDENT OF WORKS

ANNUAL REPORT

OF THE

GENERAL SUPERINTENDENT OF WORKS

ANNUAL REPORT

OF THE

General Superintendent of Works

Newark, N. J., December 31st, 1907.

MR. MORRIS R. SHERRERD, CHIEF ENGINEER,

Board of Street and Water Commissioners of the City of the City of Newark, N. J.:

DEAR SIR:—Herewith is submitted the report for the year 1907, the expenses and work performed of the following departments:

Streets and Highways,
Sewers and Drainage,
Repairs to Asphalt Streets,
Public Baths,
Crosswalks,
Sidewalk Repairs,
Public Lighting,
Scavenger,
Bridges,
Wharves.

You will note with the increased appropriation for Streets and Highways, this department was enabled to do more and better work in cleaning, repairing and grading the streets of the city; sweeping the streets by machine has been done almost every week day, when the weather permitted. The block system in cleaning the streets, in addition to cleaning by machine, has been continued and is proving a success.

The expenses of the blacksmith shop and the harness-makers shop have been included in the expenditures of the City Stables, where they properly belong.

REPORT 1907

STREETS AND HIGHWAYS

(Street Cleaning.)

1907.	Weekly Pay Roll	Bills	Monthly Pay Rolls	Total
January	$5,228.00	.....	$401.66	$5,629.66
February	9,394.00	$213.26	401.66	10,008.92
March	11,140.39	270.45	401.66	11,812.50
April	15,250.80	1,684.90	401.66	17,337.36
May	19,712.19	2,046.73	401.66	22,160.58
June	17,937.58	1,222.53	401.66	19,561.77
July	21,298.20	1,115.89	401.66	22,815.75
August	28,226.80	1,507.63	401.66	30,136.09
September	21,057.60	3,614.42	401.66	25,073.68
October	22,112.50	1,493.79	401.66	24,007.95
November	23,361.55	1,849.02	401.66	25,612.23
December	15,699.03	3,288.92	401.74	19,389.69
	$210,418.64	$18,307.54	$4,820.00	$233,546.18

(Street Repairs.)

1907.	Weekly Pay Rolls	Bills	Monthly Pay Rolls	Total
January	$288.37	.....	$276.66	$565.03
February	219.26	$154.53	276.66	650.45
March	269.70	342.62	276.66	888.98
April	1,679.10	173.57	276.66	2,129.33
May	3,167.39	3,156.39	276.66	6,600.44
June	2,641.00	2,178.74	276.66	5,096.40
July	3,290.30	1,903.93	276.66	5,470.89
August	4,303.20	4,258.23	276.66	8,838.09
September	2,977.77	2,348.71	276.66	5,603.14
October	1,950.91	1,846.10	276.66	4,073.67
November	1,870.53	951.27	276.66	3,098.46
December	1,645.40	5,889.92	276.74	7,812.06
	$24,302.93	$23,204.01	$3,320.00	$50,826.94

(City Stables.)

1907.	Weekly Pay Rolls	Bills	Total
January	$668.81	.....	$668.81
February	988.94	$493.97	$1,482.91
March	1,236.00	339.91	1,575.91
April	1,011.60	1,295.27	2,306.87
May	1,262.63	1,365.57	2,628.20
June	944.85	811.12	1,755.97
July	962.00	297.95	1,259.95
August	1,310.55	233.70	1,544.25
September	1,031.05	627.42	1,658.47
October	1,111.40	170.54	1,281.94
November	1,444.35	895.26	2,339.61
December	1,451.95	2,747.51	4,199.46
	$13,424.13	$9,278.22	$22,702.35

(Scavenger.)

1907.	Weekly Pay Roll	Bills	Total
January	$295.60	....	$295.60
February	417.20	....	417.20
March	521.50	48.40	569.90
April	426.20	64.30	490.50
May	554.50	51.70	606.20
June	519.20	168.55	687.75
July	134.30	20.00	154.30
	$2,868.50	$352.95	$3,221.45

(Miscellaneous.)

1907.	Monthly Pay Roll	Bills	Total
January	$83.33	.....	$83.33
February	83.33	.....	83.33
March	83.33	.....	83.33
April	83.33	.....	83.33
May	83.33	.....	83.33
June	83.33	$374.70	458.03
July	83.33	115.70	199.03
August	83.33	485.68	569.01
September	83.33	437.25	520.58

October	$83.33	$124.85	$208.18
November	83.33	5.00	88.33
December	83.37	13.20	96.57
	$1,000.00	$1,556.38	$2,556.38

RECAPITULATION OF DISBURSEMENTS.

Street Cleaning	$233,546.18
" Repairs	50,826.94
City Stables	22,702.35
Scavenger	3,221.45
Miscellaneous	2,556.38
Total disbursements	$312,853.30

STREETS AND HIGHWAYS—1907.

(Street Cleaning.)

	Cubic Yds.	Miles	Cost
Cleaning pavements by machine	30,440	2,193.79	$45,832.67
" block pavements by hand	35,357	2,107.98	52,340.88
" Telford pavements by hand	1,848	106.07	1,648.94
" cobble pavements by hand	4,403	128.09	5,690.95
" asphalt, brick and wood pavements by hand	35,799	8,797.47	42,409.96
" bitulithic pavements by hand	1,742	200.11	1,987.19
" gutters and spots	10,042	.....	12,112.35
" detail (intersections)	603	.....	1,138.16
Picking papers (13,636) bags	.....	.....	1,377.41
City dumps	.....	.....	3,503.13
Carpenter and helper	.....	.....	28.50
Scavenger inspectors	.....	.....	2,868.50
Removing obstructions	.....	.....	622.86
Acting foremen	.....	.....	3,349.31
Removal of snow	83,833	.....	12,405.69
Inspectors on grade crossings	.....	.....	628.75
Detailed drivers and helpers	.....	.....	107.58
Cutting grass	.....	.....	48.35
Cleaning cross walks	.....	.....	62.43
Flushing streets	.....	9.80	62.40
Spreading sand	.....	.....	30.73

	Cubic Yds.	Miles	Cost
Removing trees	.....	.....	$20.85
Miscellaneous	140	.....	231.62
Weekly salaries	.....	.....	24,777.93
Total	204,207	13,543.31	$213,287.14

(Street Repairs.)

	Loads	Miles	Cost
Dirt streets graded and filling depressions	465		$580.18
Dirt streets graded (by machine)		97.14	4,826.37
Surveyor's labor			1,772.50
Carpenter and helper			10.00
Cobble pavements repaired (31 places)			117.97
Block pavements repaired (1,350 places)			8,892.74
Brick pavements repaired (87 places)			477.02
Telford pavements repaired (12 places)			56.90
Bitulithic pavements repaired (7 places)			52.00
Engineer on steam roller			640.85
Keeper of stone yard			702.00
Lampman			728.00
Inspector on repairing pavements			63.33
Flagging city stable yard			21.60
Removing trees			103.15
Cleaning Ogden street			157.20
Moving lamp posts (Sussex avenue)			1.60
Raising manholes (Sussex avenue)			23.25
Telford repairs and oiling Clinton place			281.89
" " " " Elizabeth avenue			571.98
" " " " High street			795.10
" " Orange street			15.45
" " and oiling South Orange avenue			465.80
Oiling Elwood place and Lincoln avenue			9.00
Telford repairs and oiling Sussex avenue			993.20
" " Ogden street			22.55
Miscellaneous			48.55
Weekly salaries			1,872.75
Total			$24,302.93

(City Stables.)

Carpenter and helper	$806.00
Extra laborers	494.44
Horse cleaning	593.44
Painting	493.25
Miscellaneous	1.00
Weekly salaries	11,036.00
Total	$13,424.13

RECAPITULATION OF WEEKLY PAY ROLLS.

Street cleaning	$213,287.14
Street repairs	24,302.93
City stables	13,424.13
Total weekly pay rolls	$251,014.20

COST OF TELFORD REPAIRS ON THE FOLLOWING STREETS.

CLINTON PLACE.

Labor	$484.89
Stone	1,544.40
Oil	53.14
Coal	29.75
Total	$2,112.18

ELIZABETH AVENUE.

Labor	$778.22
Stone	2,214.00
Oil	227.48
Sprinkler	30.00
Coal	40.25
Total	$3,289.95

HIGH STREET.

Labor	$1,209.95
Stone	3,656.43
Oil	407.56
Sprinkler	45.00
Coal	70.75
Total	$5,389.69

SOUTH ORANGE AVENUE.

Labor	$700.86
Stone	936.49
Oil	152.90
Coal	43.50
Total	$1,833.75

ORANGE STREET.

Labor	$20.61
Stone	31.73
Oil	.....
Total	$52.34

LINCOLN AVENUE.

(Oiling only.)

Elwood place (labor)	$6.17
Lincoln avenue (oil)	92.50
Freight	6.00
Total	$104.67

SUSSEX AVENUE.

(Telford Repairs and Oiling.)

Labor	$1,335.63
Stone	4,405.66
Oil	43.18
Coal	101.06
Total	$5,885.53

OGDEN STREET.

Labor	$29.22
Stone	227.37
Total	$256.59

CITY STABLES.

TOTAL COST OF CITY STABLES, HARNESS SHOP, AND BLACKSMITH SHOP, INCLUDING AMOUNTS PAID BY DEPARTMENTS OTHER THAN STREETS AND HIGHWAYS.

Streets and Highways charged directly to this account	$22,702.35
Bills paid by other departments—	
Shade Tree Commission	32.50
Sewers and drainage	2,996.11
Repairs to asphalt streets	776.62
Sidewalks	32.00
Cross walks	32.50
Public lighting	811.96
Total	$27,384.04

CASH RECEIPTS.

1907.

(Street Cleaning.)

Sale of manure	$35.00
Redemption fund	542.80
Removal of snow	569.09
House moving fees	305.00
Unclaimed money	121.62
Sale of old iron	61.40
Sale of old lumber	8.50
Repairs to sweepers	113.75
Sale of old wagons	65.00
Sale of old horse	10.00
Sale of asphalt scrapers	7.25
Sale of old bags	32.00

Board of horses	$1,283.60	
Harness repairs	144.73	
Horse Shoeing	466.56	
Blacksmithing	140.64	
		$3,906.94

(Street Repairs.)

Street openings	$4,128.88	
Street repairs	2,279.35	
Sale of old stone	1,369.05	
Use of steam roller	123.60	
Inspectors on conduits	1,337.88	
Board of Horses	320.90	
Harness repairs	36.18	
Horse Shoeing	116.64	
Blacksmithing	35.16	
		$9,747.64
Total receipts Streets and Highways		$13,654.58

(Street Cleaning.)

Balance 1906	$1,304.55	
Tax Ordinance appropriation	180,000.00	
Supplementary appropriation	30,000.00	
Special appropriation (snow)	10,000.00	
Special appropriation	20,000.00	
Special appropriation	18,000.00	
Receipts 1907	3,906.94	
		$263,211.49

(Street Repairs.)

Tax Ordinance appropriation	$30,000.00	
Special appropriation (Sussex avenue)	10,000.00	
Receipts 1907	9,747.64	
		$49,747.64
Total receipts and appropriations		$312,959.13
Total disbursements		312,853.30
Balance		$105.83

REPORT ON STREET OBSTRUCTIONS.

For the Year Ending December 31st, 1907.

Number of complaints made and investigated	693
Number of obstructions removed by owners	586
Number of obstructions removed by department	107
Number of complaints made in Police Courts	82
Fines imposed in Police Courts	$100.85
Cost of removal of obstructions by department	$436.00

TOTAL DISTRIBUTION OF PAY ROLLS.

1907	Street Cleaning.	Street Repairs.	City Stables.	Scavenger.	Streets and Highways.
January	$ 5,228.00	$ 288.37	$ 668.81	$ 295.60	$ 6,480.78
February	9,394.00	219.26	988.94	417.20	11,019.40
March	11,140.39	269.70	1,236.00	521.50	13,167.59
April	15,250.80	1,679.10	1,011.60	426.20	18,367.70
May	19,712.19	3,167.39	1,262.63	554.50	24,696.71
June	17,937.58	2,641.00	944.85	519.20	22,042.63
July	21,298.20	3,290.30	962.00	134.30	25,684.80
August	28,226.80	4,303.20	1,310.55	.....	33,840.55
September	21,057.60	2,977.77	1,031.05	.....	25,066.42
October	22,112.70	1,950.91	1,111.40	.....	25,174.81
November	**23,361.55**	**1,870.53**	**1,444.35**	.....	**26,676.43**
December	**15,609.03**	**1,645.40**	**1,451.95**	.....	**18,796.38**
Total	**$210,418.64**	**$24,302.93**	**$13,424.13**	**$2,868.50**	**$251,014.20**

PUMPING STATION. ERECTED A. D. 1887.

SEWERS AND DRAINAGE.

1907.	Cleaning and Repairs.			Pumping Station.			Stable.	Total.
	Weekly Pay Rolls.	Bills.	Monthly Pay Rolls.	Weekly Pay Rolls.	Bills	Monthly Pay Rolls.		
January	$ 1,495.45	--------	$ 301.66	$ 426.00	--------	$ 100.00	--------	$ 2,323.11
February	1,474.42	$ 1,738.75	301.66	568.00	$ 65.54	100.00	--------	4,248.37
March	2,119.18	69.88	301.66	710.00	56.36	100.00	--------	3,357.08
April	2,512.45	1,013.99	301.66	568.00	100.81	100.00	$ 298.24	4,895.15
May	3,689.25	751.59	301.66	710.00	98.21	100.00	--------	5,650.71
June	2,922.68	555.94	301.66	568.00	88.27	100.00	375.00	4,911.55
July	3,088.21	846.52	301.66	568.00	587.05	100.00	765.00	7,256.44
August	3,862.28	466.50	301.66	710.00	44.53	100.00	309.47	5,794.44
September	3,161.57	1,847.05	301.66	568.00	252.57	100.00	355.90	5,586.75
October	4,364.85	1,798.49	301.66	568.00	595.86	100.00	465.00	8,193.86
November	6,046.16	1,482.97	301.66	710.00	687.39	100.00	427.50	9,755.68
December	2,573.86	2,463.89	301.74	710.00	1,800.70	100.00	--------	7,950.19
Total	$37,310.36	$13,035.57	$3,620.00	$7,384.00	$4,377.29	$1,200.00	$2,996.11	$69,923.33

Included in above payments are $3,358.59, the City's proportion of maintenance of joint outlet sewer.

REPORT 1907

DEPARTMENT OF SEWERS AND DRAINAGE

	No.	No. Loads	Amount
Basins cleaned	4281	7,431	$7,874.46
Sewers cleaned (200,880 feet)		1,479	5,733.40
Chambers cleaned, pumping station		2,005	450.25
Repairing, etc., pumping station			20.25
Basins repaired			1,068.59
General repairs			250.00
Exam. sewers and basins (detail men)			1,670.65
Ditches cleaned (41,200 feet)		231	1,763.00
Ditches repaired			171.25
Surveyor's help			989.25
Carpenter and helper			802.05
Sumps cleaned		228	460.00
Placing new manhole heads on sewers			62.55
Removing snow from basins			589.75
Repairing manholes			68.00
Inspecting brick sewers for repairs			298.00
Building manholes			50.75
Men leveling city dumps			500.20
Building basins			516.40
Inspector on Passaic River dredging			84.00
Repairs at Morris avenue bath house			34.50
Repairs at Walnut street bath house			151.75
Repairs at Summer avenue bath house			13.50
Finishing Broad street			12.50
Digging up house connection 204 Bergen street			13.75
Digging test holes			13.50
Extending pipe sewers			21.50
Building window in blacksmith shop			12.50
Rebuilding basin, Ferry and Jackson streets			38.00
Renewing basin connections			35.50
Renewing South street sump			6.25
Building pole guys South street dock			13.75
Building sumps at pumping station			16.50
Building sump, Frelinghuysen avenue			293.30
Changing fuse tanks			16.00
Repairing west Cross street sewer			25.65

Repaving over Mt. Prospect place sewer	$73.00
Repaving over Broad street sewer	23.40
Cutting weeds Wheeler Creek ditch	6.75
Repairing culvert Malvern street	10.00
Repairing around manholes and basins	13.00
Leveling Peddie Canal	288.90
Painting carts and tool boxes	58.50
Miscellaneous	28.05
Repairing road at pumping station	80.25
Sewers repaired, viz.—	
Chestnut street	11.50
Broad street	5.70
Mulberry place	5.75
56 Morton street	7.50
Hamburg place	11.50
Ridgewood avenue	258.25
397 Lafayette street	5.10
72 Brunswick street	6.15
Lang street	6.25
Bank street	13.00
Mt. Prospect place	22.50
Seventh avenue	15.60
Badger avenue	176.65
Broome street	12.50
38 Jefferson street	4.50
North Thirteenth street	199.00
Repairing small holes in brick sewers, viz.—	
506 Washington street, Springfield avenue and Eighteenth street, Centre street, Sixteenth avenue, South Orange avenue, High street, Barclay street, Central avenue, Plane street, Belleville avenue, Fourth avenue, Clark street, Walnut street, Ferry street, Seventh avenue	130.25
Service construction	4,775.13
Weekly salaries	14,295.43
Total weekly pay rolls	$44,694.36

CASH RECEIPTS.

1907.

SEWERS AND DRAINAGE.

Sewer taps	$19,500.00
Cleaning basin connections	55.85
Sale of old wagon	4.00
Repairing basin connection	36.00
Relaying basin connection	9.75
Sale of old hose	35.00
Shifting basins	3.50
Sale of old iron	86.95
Sale of horse	35.00
Cleaning private sewer	6.25
Building basins	125.00
Sale of old buggy	5.00
Service construction	4,343.47
Total	$24,247.77

SEWERS AND DRAINAGE.

Balance 1906	$1,209.92	
Tax Ordinance appropriation	40,000.00	
Special appropriation	3,000.00	
Special appropriation	1,800.00	
Receipts 1907	24,247.77	
		$70,257.69

DISBURSEMENTS.

Totals for 1907	$69,923.33
Balance	$334.36

DISTRIBUTION OF PAY ROLLS, SEWERS AND DRAINAGE.

1907.	Foreman.	Inspector of Taps.	Detail.	Carpenter.	Laborers.	Gate Tender.	Pumping Station. Engineer.	Pumping Station. Fireman.	Pumping Station. Sundries.	Pumping Station. Laborers.	Surveyor's Detail.	Sundries.	E. S. Rankin Dept.	Total Pay Roll.
January	$ 180.00	$ 123.21	$ 51.00	$ 51.00	$ 1,001.24	$ 45.00	$ 120.00	$ 216.00	------	$ 90.00	$ 44.00	------	------	$ 1,921.45
February	240.00	164.28	68.00	66.00	820.14	60.00	160.00	288.00	------	120.00	56.00	------	------	2,042.42
March	300.00	205.35	85.00	69.00	1,314.83	75.00	200.00	360.00	------	150.00	70.00	------	------	2,829.18
April	240.00	164.28	68.00	54.00	1,810.17	60.00	160.00	288.00	------	120.00	116.00	------	------	3,080.45
May	300.00	205.35	85.00	68.75	2,811.15	75.00	200.00	360.00	------	150.00	144.00	------	------	4,399.25
June	240.00	164.28	68.00	50.25	2,265.15	60.00	160.00	288.00	------	120.00	75.00	------	------	3,490.68
July	240.00	164.28	68.00	92.00	2,373.93	60.00	160.00	288.00	------	120.00	90.00	------	------	3,656.21
August	300.00	205.35	85.00	72.00	2,792.93	75.00	200.00	360.00	190.75	150.00	111.25	30.00	------	4,572.28
September	240.00	164.28	68.00	36.00	2,150.99	60.00	160.00	288.00	------	111.43	56.00	18.00	376.87	3,729.57
October	240.00	164.28	68.00	40.00	2,327.95	60.00	160.00	288.00	------	120.00	59.00	36.00	1,369.62	4,932.85
November	300.00	205.35	85.00	90.00	2,898.17	75.00	200.00	360.00	------	150.00	70.00	------	2,322.64	6,756.16
December	300.00	205.71	85.00	72.00	1,060.15	75.00	200.00	360.00	------	150.00	70.00	------	706.00	3,283.86
Total	$3,120.00	$2,136.00	$884.00	$761.00	$23,626.80	$780.00	$2,080.00	$3,744.00	$190.75	$1,551.43	$961.25	$84.00	$4,775.13	$44,694.36

REPAIRS TO ASPHALT STREETS

1907.	Pay Rolls	Bills	Sable	Total
January	$222.20	.....	.....	$222.20
February	80.00	$252.00	.....	332.00
March	158.35	367.84	.....	526.19
April	640.60	168.72	.....	809.32
May	844.20	2,586.34	.....	3,430.54
June	919.03	1,388.74	.....	2,307.77
July	949.04	1,854.24	$386.62	3,189.90
August	1,042.96	8,597.22	.....	9,640.18
September	846.06	3,992.20	390.00	5,228.26
October	744.06	2,976.31	.....	3,720.37
November	835.11	5,152.17	.....	5,987.28
December	528.78	3,596.82	.....	4,125.60
	$7,810.39	$30,932.60	$776.62	$39,519.61

REPAIRS TO ASPHALT STREETS—1907.

Location of Work	Maintenance	Cost	Total Sq. Yards
Bank Street	87.55	13.46	101.01
Barclay Street	8.25	1.73	9.98
Blum Street	.....	5.70	5.70
Broad Street	465.58	1,098.60	1,564.18
Bruce Street	56.44	69.55	125.99
Camden Street	47.16	1.96	49.12
Cedar Street	40.03	1.11	41.14
Clifton Avenue	31.48	10.36	41.84
Clinton Avenue	253.71	17.00	270.71
Clinton Street	15.94	7.20	23.14
Court Street	.....	2.88	2.88
East Park Street	277.07	8.93	286.00
Elizabeth Avenue	10.40	6.27	16.76
Fulton Street	35.58	.....	35.58
Fourth Avenue	.....	4.78	4.78
Franklin Street	.....	7.86	7.86
Grant Street	184.24	3.31	187.55
Garside Street	3.50	11.83	15.39
Gould Avenue	65.44	.....	65.44
Governeur Street	.....	5.40	5.40
Harvey Street	36.42	.....	36.42

Location of Work	Maintenance	Cuts	Total Sq. Yards
Holland Street	12.36	7.64	20.00
Humboldt Street	1.53	4.92	6.45
Halsey Street	584.16	83.15	677.31
Littleton Avenue	9.92	21.38	31.30
Lincoln Park	3.75	.....	3.75
Lafayette Street	6.23	1.51	7.74
Library Court	12.22	.....	12.22
Murray Street	.69	.....	.69
Mt. Prospect Avenue	35.94	.....	35.94
Milford Avenue	.....	7.16	7.16
Monmouth Street	.55	2.41	2.96
Morton Street	10.21	10.97	21.18
Myrtle Avenue	.....	8.53	8.53
Milton Street	2.14	.....	2.14
North Canal Street	285.66	5.11	290.77
Newton Street	14.74	15.10	29.84
North Sixth Street	205.87	1.06	206.93
North Seventh Street	428.51	77.09	505.60
New Street	514.63	19.69	534.32
Ninth Avenue	.....	3.59	3.59
Nursery Street	17.55	.....	17.55
Nutria Street	.....	12.89	12.89
Orchard Street	20.88	.....	20.88
Oriental Street	31.31	.....	31.31
Ogden Street	76.61	.....	76.61
Park Place	870.40	69.30	939.70
Pennsylvania Avenue	34.67	3.81	38.48
Parker Street	10.71	10.39	21.10
Pennsylvania R. R. Plaza	.....	1.55	1.55
Quitman Street	17.68	23.00	30.68
South Street	.....	2.82	2.82
South Sixth Street	20.61	.....	20.61
South Seventh Street	572.35	69.31	641.66
South Eighth Street	411.46	59.05	470.51
Sherman Avenue	7.06	5.77	13.83
Somerset Street	1.69	5.92	7.61
Summer Avenue	204.17	5.89	210.06
State Street	76.13	.....	76.13
Sixth Avenue	41.14	50.52	91.66
South Twelfth Street	.....	2.71	2.71
Scott Street	.....	.88	.88

Location of Work	Maintenance	Cut	Total Sq. Yards
Summit Street	9.16	.....	9.16
Tichenor Street	7.19	1.23	8.42
Thomas Street	11.11	.....	11.11
Thirteenth Avenue	21.52	.....	21.52
Third Street	89.50	79.15	168.65
Third Avenue	272.54	2.21	274.75
Washington Street	300.83	17.61	318.44
Washington Place	179.08	.....	179.08
Washington Avenue	.....	9.34	9.34
William Street	12.16	11.50	23.66
Waverly Avenue	.....	14.26	14.26
Wakeman Avenue	219.31	.....	219.31
Wright Street	9.37	.....	9.37
Warren Street	73.26	.....	73.26
Total square yards	7,368.50	2,006.44	9,374.94

REPAIRS TO ASPHALT STREETS.

The following tabulations will show the general maintenance as per contract with the Standard Bitulithic Company:

	Sq. Yards
Halsey Street	786.23
William Street	57.42
Court Street	36.77
Clinton Avenue	673.42
Lincoln Park	51.26
Pennsylvania Avenue	452.15
South Street	295.45
Murray Street	80.09
Astor Street	156.02
Wright Street	85.84
Sherman Avenue	236.93
Elizabeth Avenue	30.90
Madison and Belmont Avenues	11.50
Emmet Street	66.02
Orchard Street	699.00
Chestnut Street	27.00
Camp Street	201.00
Pennington Street	21.00
Tichenor Street	266.00
Camden Street	10.00
Thomas Street	364.00

Rose Street	96.00
Waverly Avenue	80.00
Somerset Street	265.00
Barclay Street	480.00
South Sixth Street	897.00
South Seventh Street, Resur	10,947.00
Walnut Street	36.00
Elm Street	135.00
Lafayette Street	573.00
Littleton Avenue	16.00
Monmouth Street	112.00
Thirteenth Avenue	17.00
Total (sq. yds.)	18,262.00
Total amount paid Standard Bitulithic Company	$18,171.76

In connection with the foregoing, there has also been paid on account of the maintenance of asphalt pavements, according to the terms of the contracts for paving certain streets, the following amounts, which were charged to Repairs to Asphalt Streets:

J. R. Shanley	$1,650.75
Barber Asphalt Paving Co	2,334.05
Atlantic Alcatraz Co	714.30
Metropolitan Asphalt Paving Co	1,781.65
	$7,480.75

SUMMARY.

Weekly Pay Roll and Supplies	$13,867.10
Maintenance of Asphalt Pavements as per contract with the Standard Bitulithic Co	18,171.76
Maintenance of Asphalt Pavements as per five year term guarantee on outstanding contracts	7,480.75
Total	$39,519.61

REPAIRS TO ASPHALT STREETS.

RECEIPTS.

Balance, 1906	$1,108.43	
Tax Ordinance Appropriations	40,000.00	
Cash Receipts	5,602.29	
		$46,710.72

DISBURSEMENTS.

Total for 1907	$39,519.61
Balance	$7,191.11

DISTRIBUTION OF PAY ROLL.

REPAIRS TO ASPHALT STREETS.

1907	Foreman.	Laborers.	Drivers.	Horse and Wagon Hire.	Inspectors.	Sundries.	Pay Roll.
January	$ 60.00	$ 158.70	$ 21.75	$ 1.75	____	____	$ [illegible]
February	80.00	____	____	____	____	____	80.00
March	100.00	46.35	12.00	____	____	____	158.35
April	80.00	392.25	36.75	$ 54.60	$ 77.00	____	640.60
May	100.00	548.45	55.75	84.00	56.00	____	844.20
June	80.00	554.88	43.75	206.80	35.00	____	920.43
July	80.00	566.89	40.25	191.90	70.00	____	948.04
August	100.00	654.81	58.20	187.95	42.00	____	1,042.96
September	80.00	494.41	46.25	162.40	63.00	____	846.06
October	80.00	453.76	50.00	150.85	____	$0.45	744.06
November	100.00	309.76	58.75	166.60	____	____	635.11
December	100.00	356.43	32.75	61.60	____	____	528.78
Total	$1,040.00	$4,684.49	$456.20	$1,267.25	$343.00	$0.45	$7,791.39

PUBLIC BATHS

1907.	Weekly Pay Roll	Bills	Total
January	$110.50	.....	$110.50
February	144.00	14.05	158.05
March	207.00	60.82	267.82
April	627.00	109.03	736.03
May	807.00	266.47	1,073.47
June	627.00	695.95	1,322.95
July	694.75	200.47	895.22
August	947.00	399.50	1,346.50
September	790.00	277.63	1,067.63
October	782.00	121.39	903.39
November	970.00	252.42	1,222.42
December	886.00	1,660.90	2,546.90
	$7,592.25	$4,058.63	$11,650.88

ATTENDANCE.

1907.	Summer Ave.		Walnut St.		Morris Ave.	
	Males	Females	Males	Females	Males	Females
April	1,042	5	1,070	15	966	16
May	1,637	27	1,600	31	1,361	14
June	3,733	309	3,723	295	3,568	158
July	7,640	950	10,580	925	11,119	950
August	5,718	770	6,700	815	7,711	828
September	2,298	160	2,345	175	2,394	101
October	1,073	71	1,088	60	1,020	17
November	324	9	757	10	798	9
December	....	....	415	57	517	....
	23,465	2,301	28,278	2,383	29,454	2,093

Total Males	81,197	
Females	6,777	
		87,974

RECEIPTS FROM USE OF TOWELS, SUITS, DRESSING ROOMS AND SHOWER BATHS.

Summer Avenue	$385.65
Walnut Street	413.60
Morris Avenue	485.35
Total	$1,284.60

RECEIPTS.

Balance, 1906	$185.49	
Tax Ordinance Appropriation	12,500.00	
Cash Receipts	1,284.60	
		$13,971.09

DISBURSEMENTS.

Total, 1907	$11,650.88
Balance	$2,320.21

DISTRIBUTION OF PAY ROLL.

PUBLIC BATHS.

1907.	Supt.	Asst. Supt.	Engineer.	Matron.	Watchman.	Sundries.	Carpenter.	Pay Roll.
January	———	———	$ 2.50	———	$108.00	———	———	$ 110.50
February	———	———	———	———	144.00	———	———	144.00
March	———	———	———	———	180.00	———	$27.00	207.00
April	$ 180.00	$ 180.00	195.00	$ 36.00	36.00	———	———	627.00
May	270.00	225.00	225.00	60.00	———	———	27.00	807.00
June	216.00	180.00	180.00	48.00	———	———	3.00	627.00
July	243.00	201.25	202.50	48.00	———	———	———	694.75
August	315.00	262.50	262.50	60.00	———	$ 40.00	7.00	947.00
September	252.00	210.00	210.00	48.00	———	56.00	14.00	790.00
October	252.00	210.00	210.00	48.00	———	56.00	6.00	782.00
November	315.00	262.50	262.50	60.00	———	70.00	———	970.00
December	285.00	237.50	237.50	60.00	———	66.00	———	885.00
Total	$2,328.00	$1,968.75	$1,987.50	$468.00	$468.00	$288.00	$84.00	$7,592.25

SIDEWALKS

1907.	Weekly Pay Rolls	Bills	Stable	Total
January	$105.00	.....	.....	$105.00
February	140.00	406.85	.....	546.85
March	175.00	460.25	.....	635.25
April	140.00	30.00	.....	170.00
May	175.00	170.99	.....	345.99
June	140.00	122.35	.....	262.35
July	140.00	346.99	.....	486.99
August	145.00	458.50	.....	603.50
September	140.00	732.01	.....	872.01
October	140.00	815.36	.....	955.36
November	179.75	2,010.29	32.00	2,222.04
December	631.67	2,293.91	.....	2,925.58
	$2,251.42	$7,847.50	$32.00	$10,130.92

REPORT OF SIDEWALKS FOR 1907.

	Sq. Ft.
New walks laid by property owners	30,000
Walks relaid by property owners	415,118
Concrete walks laid by property owners	560,803
New walks laid by order of the Board	37,196
Walks relaid by order of the Board	15,150
New walks laid by ordinance as per contract	144,562
Concrete walks laid by ordinance as per contract	20,000
Total	1,222,829
Curb reset by property owners	405 Lineal Ft.
Sidewalks inspected	78 Miles

RECEIPTS.

Balance, 1906	$4,502.69	
Tax Ordinance Appropriation	2,000.00	
Cash Receipts	3,882.57	
		$10,385.26

DISBURSEMENTS.

Total, 1907	$10,130.92
Balance	$254.34

DISTRIBUTION OF PAY ROLL.

SIDEWALKS.

1907.	Inspector	Assistant Inspector	Sundries	Special Inspectors	Pay Roll
January	$60.00	$45.00	.....	.....	$105.00
February	80.00	60.00	.....	.....	140.00
March	100.00	75.00	.....	.....	175.00
April	80.00	60.00	.....	.....	140.00
May	100.00	75.00	.....	.....	175.00
June	80.00	60.00	.....	.....	140.00
July	80.00	60.00	.....	.....	140.00
August	60.00	85.00	.....	.....	145.00
September	80.00	60.00	.....	.....	140.00
October	80.00	60.00	.....	.....	140.00
November	100.00	75.00	4.75	.....	179.75
December	106.67	80.00	.....	445.00	631.67
Totals	$1,006.67	$795.00	$4.75	$445.00	$2,251.42

SCAVENGER

The following are the number of cubic yards of Ashes and Rubbish, the number of tons of Garbage, also the number of tons of Paper collected during the year 1907:

1907.	Ashes and Rubbish.	Garbage	Paper
January	37,530 cu yds.	1,420 tons.	23,530 lbs. paper
February	35,350 "	1,472 "	27,000 " "
March	35,170 "	1,384 "	26,940 " "
April	31,800 "	1,370 "	31,200 " "
May	30,418 "	1,348 "	33,170 " "
June	27,140 "	1,800 "	29,175 " "
July	25,751 "	2,020 "	28,200 " "
August	26,810 "	2,371 "	29,400 " "
September	28,650 "	2,530 "	30,000 " "
October	33,480 "	2,485 "	31,200 " "
November	35,150 "	1,507 "	23,000 " "
December	37,000 "	1,311 "	22,400 " "
	385,200 "	21,018 "	335,215 " "

SCAVENGER.

RECEIPTS.

Tax Ordinance Appropriation	$83,000.00	
Special Appropriation	15,000.00	
		$98,000.00

DISBURSEMENTS.

Total for 1907	$97,715.90
Balance	$284.10

DISTRIBUTION OF PAY ROLL.

SCAVENGER.

1907. INSPECTORS' PAY ROLL.

January	$322.50
February	430.00
March	537.50
April	430.00
May	537.50
June	360.80
July	647.93
August	976.00
September	780.80
October	765.80
November	976.00
December	1,012.60
Total	$7,777.43

CROSS WALKS

1907.	Weekly Pay Roll	Mile	Sales	Total
January	$89.25	.....	.....	$89.25
February	.....	.....	.....	.....
March	8.10	.....	$32.50	40.60
April	333.30	$212.35	.....	545.65
May	471.70	102.85	.....	574.55
June	590.10	73.37	.....	663.47
July	530.10	90.00	.....	620.10
August	561.60	25.75	.....	587.35
September	338.25	22.50	.....	360.75
October	383.65	23.70	.....	407.35
November	331.90	25.00	.....	356.90
December	117.70	168.30	.....	286.00
Totals	$3,755.65	$746.02	$32.50	$4,534.18

CROSS WALKS.

1907.	No. of New Walks Laid	No. of Repairs	Cost
January	2	8	$89.25
February	..	..	.....
March	1	..	8.10
April	1	29	333.30
May	4	50	471.70
June	6	53	590.10
July	..	57	530.10
August	..	70	561.60
September	4	21	338.25
October	6	26	383.65
November	4	21	331.90
December	1	9	117.70
Total	29	344	$3,755.65

RECEIPTS.

Balance, 1906	$553.57	
Tax Ordinance Appropriation	4,000.00	
		$4,553.57

DISBURSEMENTS.

Total, 1907	$4,534.18
Balance	$19.39

GOVERNOR STREET PAVING. LOOKING WEST FROM WASHINGTON STREET. BRICK.

DISTRIBUTION OF PAY ROLL.

1907.	Laborers	Drivers	Horse and Wagon Hire	Pay Roll
January	$65.00	$24.25	.....	$89.25
February	.....	.....	.....	.....
March	5.85	2.25	.....	8.10
April	290.55	42.75	.....	333.30
May	409.45	62.25	.....	471.70
June	494.35	46.25	49.50	590.10
July	426.60	19.50	84.00	530.10
August	472.60	40.50	48.50	561.60
September	288.25	50.00	.....	338.25
October	336.90	46.75	.....	383.65
November	280.65	51.25	.....	331.90
December	83.20	34.50	.....	117.70
Totals	$3,153.40	$420.25	$182.00	$3,755.65

BRIDGES

1907.	Weekly Pay Roll	Bills	Total
January	$24.00	.....	$24.00
February	3.25	282.70	285.95
March	34.00	.....	34.00
April	16.00	70.00	86.00
May	43.00	8.82	51.82
June	145.40	459.55	604.95
July	5.00	83.79	88.79
August	5.00	57.77	62.77
September	83.75	.....	83.75
October	.....	177.32	177.32
November	23.00	92.06	115.06
December	17.50	35.21	52.71
Totals	$399.90	$1,267.22	$1,667.12

RECEIPTS.

Balance, 1906	$1,180.13	
Tax Ordinance Appropriation	1,000.00	
		$2,180.13

DISBURSEMENTS.

Total, 1907	$1,667.12
Balance	$513.01

DISTRIBUTION OF PAY ROLL.

1907.	Carpenter	Laborer	Painter	Teamster	Pay Roll
January	$6.00	$6.00	$12.00	.....	$24.00
February	3.25	.....	.....	.....	3.25
March	18.00	16.00	.....	.....	34.00
April	.....	4.00	12.00	.....	16.00
May	18.00	25.00	.....	.....	43.00
June	54.00	82.25	.....	9.15	145.40
July	.....	.....	.....	5.00	5.00
August	3.00	2.00	.....	.....	5.00
September	42.00	40.50	.....	1.25	83.75
October	.....	.....	.....	.....	.....
November	6.00	17.00	.....	.....	23.00
December	9.00	8.50	.....	.....	17.50
Totals	$151.25	$201.25	$24.00	$15.40	386.90

WHARVES

1907.	Weekly Pay Roll	Bills	Total
August	.....	$94.50	$94.50
September	54.00	1,147.50	1,201.50
October	18.00	8,300.10	8,318.10
November	.....	.....	.....
December	.....	80.00	80.00
Totals	$72.00	$9,622.20	$9,694.20

Included in above are payments made to P. Sandford Ross for dredging Passaic River, amounting to $9,447.60.

RECEIPTS.

Balance, 1906		$2,721.66
Special Appropriation		10,800.00
Cash Receipts, Rents City Docks	$870.00	
Wharfage	294.00	
		1,164.00
Total		$13,885.66

DISBURSEMENTS.

Total for 1907	$9,694.20
Balance	$4,191.46

RECAPITULATION OF CASH RECEIPTS, 1907.

Streets and Highways	$13,654.58
Sewers and Drainage	24,247.77
House Sewer Connections	250.38
Surveyors' Department	681.83
Wharves	1,164.00
Public Lighting	273.27
Public Baths	1,284.60
Repairs to Asphalt Streets	5,602.29
Total Receipts	$47,158.72

REPORT OF ELECTRICAL MACHINIST

STREET RAILWAYS.

Flat wheels removed		178
Defective fenders removed		164
Defective cars removed		44
		386
Closed cars in use, 1906	455	
Open cars in use, 1906	150	
	605	
Closed cars in use, 1907	472	
Open cars in use, 1907	190	
	662	
Increase of cars in service		57

DEPARTMENT OF PUBLIC LIGHTING

This Department has the care of 2,402 Electric Arc Lamps, 179 Electric Incandescent Lamps, and 2,032 Gas Lamps, a total of 4,613 lamps.

ELECTRIC LIGHTING.

Arc lamps in use December 31, 1906		2,235
" " installed during year	171	
" " discontinued during year	4	
		167
Arc lamps in use December 31, 1907		2,402
Increase		167

These 167 new arcs have been installed in such location as an absolute need for them seemed to demand.

Outages reported during the year were 33,911 lamp-hours, for which a pro rata deduction was made.

Arc lamps are of nominal 2,000 candle power.

Contract requirements are 450 watts of electrical energy at lamp terminal.

The lamps in use are the General Electric, alternating current.

Lamps burn 4,000 hours, and have cost $95.00 per lamp per annum, to June 1st, 1907.

On June 1st, 1907, the cost was reduced to $75.00 and will be further reduced on Sept. 1st, 1908, to $70.00, under a new contract, to run until Sept. 1st, 1912.

The Company sets all the arc lamp poles as located and ordered by the Superintendent of Lighting, and is required to keep and maintain all lamp poles, lines and lamps used for the city's lighting in good condition, to the satisfaction of the Superintendent.

One hundred and ninety-three arc lamps are connected with the underground service in the following streets:

Market Street, from P. R. R. to Court House Square.
Springfield Avenue, from Market Street to Bergen Street.
Broad Street, from Clay to Court Streets
Ferry Street, from P. R. R. to Hamburg Place
Halsey Street, from Market Street to Central Avenue.
Washington Street, from Market Street to Bank Street.
Mulberry Street, from Canal Street to Mechanic Street.
Mechanic Street, from Mulberry Street to Broad Street.
[illegible] Street, from Mulberry Street to Broad Street.
[illegible] Street, from Bank Street to Washington Street.
[illegible] Street.
[illegible] Street to Broad Street to Halsey Street.
[illegible] Park Street, [illegible] Broad Street to Halsey Street.
[illegible] Street [illegible] Broad Street to Halsey Street.
[illegible] Avenue [illegible] Street to Halsey Street.
[illegible] Street [illegible] Street to Halsey Street.

ELECTRIC INCANDESCENTS.

Electric incandescents in use December 31st, 1906		182
Installed during the year	26	
Discontinued during the year	29	
In use December 31st, 1907		179
Decrease		3

Electric incandescents are of 32 candle power, burn 4,000 hours, and cost $15.00 per lamp per year.

GAS LIGHTING.

Gas lamps in use December 31, 1906		2,103
" " lighted during year	26	
" " relighted during year	10	
" " discontinued during year	107	
" " in use December 31, 1907		2,032
Decrease		71

Electric lighting was substituted for the 107 gas lamps that have been discontinued.

Outages reported during the year were 3,757 gas lamps, or 46,096 lamp-hours, for which a pro rata deduction was made.

The lamps in use are the square street lamps and Miners No. 2 globe lamps. The burner is a 4 foot open flat flame.

Lamps burn 4,000 hours, and cost $19.00 per lamp per year.

The gas furnished during the year averaged 20 candle-power.

Contract requirements are 14 candle-power.

The contract for gas lighting will expire March 1, 1908.

The contractor furnishes the gas, burners, and lamp lighters, and the city furnishes the lamps and lamp posts, and provides for the setting of the lamp posts, has service pipes laid from the gas mains to the top of lamp posts, and maintains all such lamps, service pipes and posts in good repair.

There is one gas lamp in use for the purpose of indicating the location of a fire alarm signal box on the corner of Broad and Green Streets, and two others, one on the corner of Broad and Mechanic Streets, and one on the junction of Springfield and South Orange Avenues, have been connected with the gas mains and are ready to be installed.

Attention was given 11,966 gas lamps during the year. Considerable of this work was thawing out frozen lamps during the severe cold weather of the months of January and February.

Six thousand three hundred and forty-nine lights of glass have been put in 4,383 lamps. A large number of these lights of glass were broken by boys with slung shots, air rifles and other missiles.

Four hundred and forty-one globes, and 598 new lever street lamp cocks, have been placed on lamps.

Eight lamp posts have been reset to curb and street line, and twenty-seven straightened.

Seventy-three leaky service pipes have been repaired, and eighteen cleared.

One hundred and sixteen lanterns have been repaired and 517 painted.

The gas company extended its mains for street lighting on Delancy Street, south of Pacific, and on Brookdale Avenue, south of South Orange Avenue.

The candle-power of the gas during the year was: Highest, 23.5; lowest, 16; average, 20 candles.

The pressure of the gas was: Highest, 3.60 inches; lowest, 1.90 inches; average, 2.59 inches.

The total number of meters tested during the year was 4,114, of these 48 were incorrect.

The following table shows the total number of lamps in use each year as per annual report since 1900:

	Electric Arc Lamps	Electric Incandescent Lamps	Gas Lamps	Total	Annual Increase
Dec. 31, 1900	1725	12	2,009	3,746	...
1901	1794	9	2,074	3,877	131
1902	1859	60	2,180	4,099	222
1903	1973	61	2,155	4,189	90
1904	2038	87	2,139	4,264	75
1905	2154	170	2,131	4,455	191
1906	2235	182	2,103	4,520	65
1907	2402	179	2,032	4,613	93

Increase since 1900: Arcs, 677; incandescent, 167; gas, 23; total, 867.

DEPARTMENT OF POLES AND WIRES

POLES, CABLE CONDUCTORS AND OPEN WIRES, CONDUITS, DUCTS AND MANHOLES WITHIN THE CITY LIMITS.

PUBLIC SERVICE RAILWAY COMPANY.

	Wood	Iron	
Number of poles December 31, 1906.....	30	4,711	4,741
Number of poles erected during year.....	0	9	
" " " removed during year.....	0	31	
" " " December 31, 1907.....	30	4,689	—4,719
Decrease			22

Number of miles of cable, aerial, December 31, 1907—

1,000,000 C. M.....	24 miles	
750,000 C. M.	12 "	
500,000 C. M.....	70.403 "	
211,600 C. M.....	36.767 "	
		107.530

Number of miles of cable in subways, Dec. 31, 1907—

1,000,000 C. M.....	17.08 miles	
750,000 C. M.....	1.872 "	
500,000 C. M.....	7.417 "	
1,000,000 C. M. bare copper.	10.141 "	
2/0 3 Conductor.....	11.22 "	
		47.730

Number of miles of wire—aerial—	
1/0 trolley and 2/0 trolley.....	99.39 miles
Number of miles of conduits Dec. 31, 1906.....	10.84 "
Single duct	145.765 "
Conduits	10.84 "
Single duct	145.765 "
Number of manholes Dec. 31, 1906.....	174
" " " Dec. 31, 1907.....	174

PUBLIC SERVICE CORPORATION ELECTRICAL DEPARTMENT.

	Wood	
Number of poles Dec. 31, 1906	6,108	
Erected during year	367	
Removed	166	
Replaced	168	
Number of poles Dec. 31, 1907		6,475
Increase		367

Number of miles of cable in subways	101.4
" " " " conductors, aerial	674
" " " " conduits Dec. 31, 1906	8.4
" " " " conduits Dec. 31, 1907	9.1
" " " " single ducts Dec. 31, 1906	111.8
" " " " single ducts Dec. 31, 1907	120.56
Number of manholes Dec. 31, 1906	387
" " " Dec. 31, 1907	429

NEW YORK AND NEW JERSEY TELEPHONE COMPANY.

	Wood	Iron
Number of poles Dec. 31, 1906	3,785	1—3,786
" " " erected during year	95	
" " " removed during year	30	
" " " replaced during year	137	
" " " Dec. 31, 1907	3,818	1—3,819
Increase		33

Number of miles of cable, aerial, Dec. 31, 1907	16.54
" " " " cables in subways	83.58
" " " " conductors, aerial, Dec. 31, 1907	920.49
" " " " conductors in subways	36,982.90
" " " " conduits Dec. 31, 1906	40.894
" " " " conduits Dec. 31, 1907	50.19
" " " " single ducts Dec. 31, 1906	230.686
" " " " single ducts Dec. 31, 1907	346.28
Number of manholes Dec. 31, 1906	540
" " " Dec. 31, 1907	695

WESTERN UNION TELEGRAPH COMPANY.

Number of poles Dec. 31, 1906, wood	458	
Erected during year	8	
Number of poles Dec. 31, 1907	466	
Number of poles along railroads Dec. 31, 1907	521—	987
Number of miles cables, aerial, Dec. 31, 1907	5.55	
Number of miles cables, aerial, along railroads Dec. 31, 1907	13.98—	19.53
Number of miles conductors, aerial, Dec. 31, 1907	181.5	
Along railroads	414.10—	595.60

NEWARK TELEPHONE COMPANY.

Number of poles Dec. 31, 1906, wood	449
Replaced during year	1
December 31, 1907	449
Number of miles of cables, aerial, Dec. 31, 1907	2
Cables in subways Dec. 31, 1907	18.70
Conductors, aerial	17.31
In subways	2334
Conduits Dec. 31, 1906	922
Conduits Dec. 31, 1907	922
Single ducts Dec. 31, 1906	44.64
Single ducts Dec. 31, 1907	44.64
Number of manholes Dec. 31, 1906	86
Number of manholes Dec. 31, 1907	86

NORTHEASTERN TELEPHONE AND TELEGRAPH COMPANY.

Number of poles Dec. 31, 1907, wood	251
Number of miles of cables in subways	3.25
" " " " conductors, aerial	304.4
" " " in subways	643.50

POSTAL TELEGRAPH CABLE COMPANY.

This company has no poles; uses poles of Public Service Corporation of N. J., and ducts of the N. Y. & N. J. Tel. Co.

Number of miles of conductors, aerial, Dec. 31, 1907	125
In subways, Dec. 31, 1907	30

NEWARK DISTRICT TELEGRAPH COMPANY.

Number of poles Dec. 31, 1906	4
Erected during year	1
Number of poles December 31, 1907	5
Increase	1
Number of miles of cable, aerial, Dec. 31, 1907	.75
Cable in subways	2.25
Conductors, aerial	8
Conductors in subways	221

Company uses ducts of Telephone Companies.

POLICE DEPARTMENT SIGNAL SERVICE.

Maintained by N. Y. & N. J. Telephone Co.

Number of poles Dec. 31, 1906, wood	115
Erected during year	2
Dec. 31, 1907	117
Number of miles of cables, aerial, Dec. 31, 1907	.5
In subways Dec. 31, 1907	9.96
Open wire	170.2
Conductors, aerial	180.2
Conductors in subways	104.94

FIRE DEPARTMENT SIGNAL SERVICE.

Number of poles Dec. 31, 1906, wood	670
Erected during year	2
Removed during year	12
Number of poles Dec. 31, 1907	660
Decrease	10
Number of miles of cable, aerial, Dec. 31, 1907	.5
In subways Dec. 31, 1907	19.76
Number of miles of conductors, aerial, Dec. 31, 1907	144.
In subways Dec. 31, 1907	192.97

SUMMARY.

Total number of poles, wood	12,762	
" " " " iron	4,690	—17,452
Total number of miles of cable, aerial	147.410	
" " " " " " in subways	286.630	— 434.04
" " " " " conductors, aerial	4751.79	
" " " " " conductors in subways	40,529.27	—45,281.06
" " " " " conduits		79.35
" " " " " single ducts		657.245

Public Service Corp. of N. J.—Street Ra							
Public Service Corp. of N. J.—Electrical							
New York and New Jersey Telephone (							
Newark Telephone Company							
Western Union Telegraph Company							
Northeastern Telephone and Telegraph							
Postal Telegraph Cable Company							
Newark District Telegraph Company							
Police Department Signal Service							
Fire Department Signal Service							
Total							

NEWARK DISTRICT TELEGRAPH COMPANY.

Number of poles Dec. 31, 1906	4
Erected during year	1
Number of poles December 31, 1907	5
Increase	1
Number of miles of cable, aerial, Dec. 31, 1907	.75
Cable in subways	2.25
Conductors, aerial	8
Conductors in subways	221

Company uses ducts of Telephone Companies.

POLICE DEPARTMENT SIGNAL SERVICE.

Maintained by N. Y. & N. J. Telephone Co.

Number of poles Dec. 31, 1906, wood	115
Erected during year	2
Dec. 31, 1907	117
Number of miles of cables, aerial, Dec. 31, 1907	.5
In subways Dec. 31, 1907	9.96
Open wire	170.2
Conductors, aerial	180.2
Conductors in subways	104.94

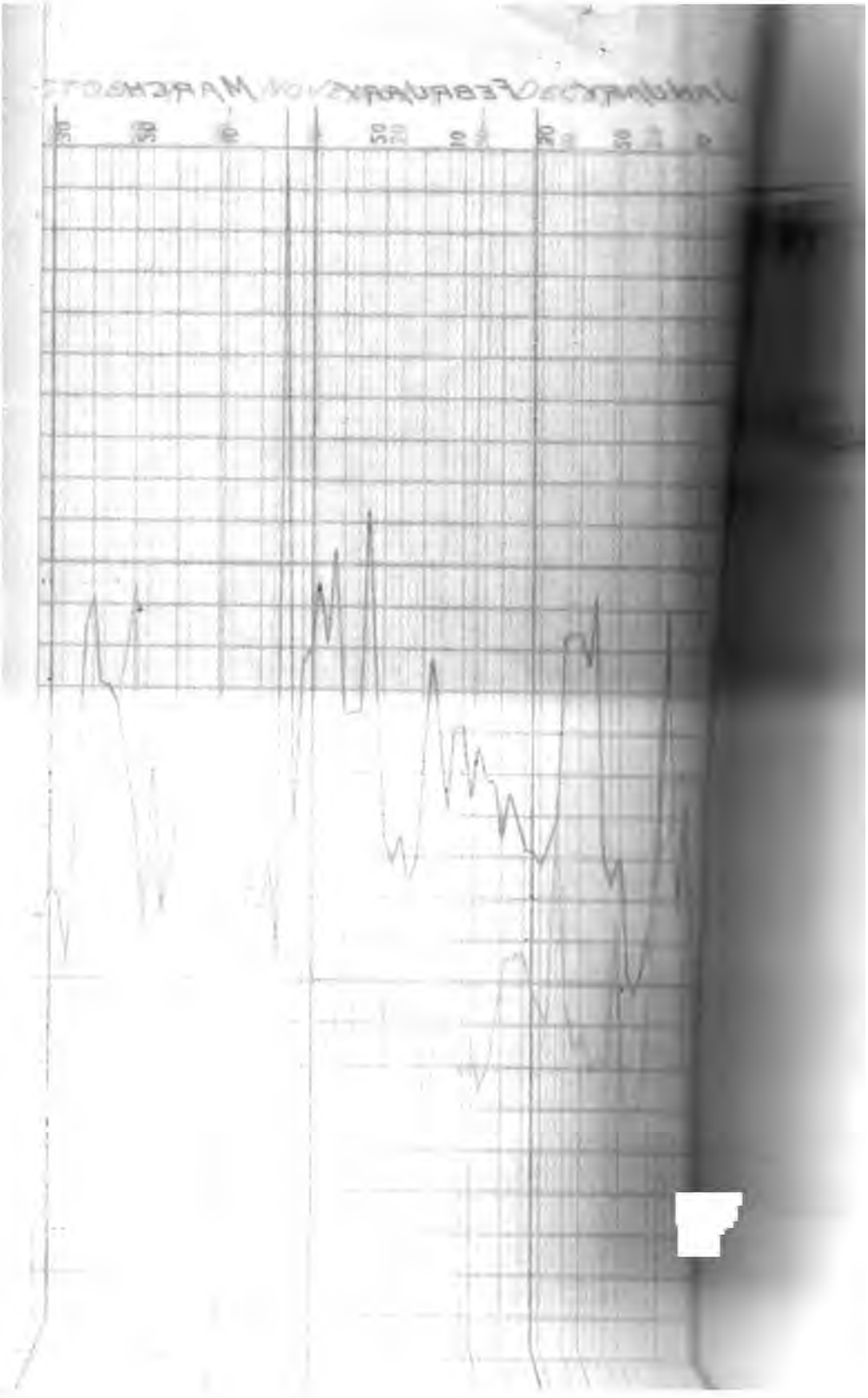
FIRE DEPARTMENT SIGNAL SERVICE.

Number of poles Dec. 31, 1906, wood	670
Erected during year	2
Removed during year	12
Number of poles Dec. 31, 1907	660
Decrease	10
Number of miles of cable, aerial, Dec. 31, 1907	.5
In subways Dec. 31, 1907	19.76
Number of miles of conductors, aerial, Dec. 31, 1907	144.
In subways Dec. 31, 1907	192.97

SUMMARY.

Total number of poles, wood	12,762	
" " " " iron	4,690—	17,452
Total number of miles of cable, aerial	147.410	
" " " " " " in subways	286.630—	434.04
" " " " " conductors, aerial	4751.79	
" " " " " conductors in subways	40,529.27—	45,281.06
" " " " " conduits		79.35
" " " " " single ducts		657.245

Public Service Corp. of N. J.—Street Ra	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Public Service Corp. of N. J.—Electrical	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
New York and New Jersey Telephone (	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Newark Telephone Company	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Western Union Telegraph Company	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Northeastern Telephone and Telegraph	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Postal Telegraph Cable Company	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Newark District Telegraph Company	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Police Department Signal Service	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Fire Department Signal Service	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Total	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]



Park Pl.
Hill St.
lford Ave.
Lake St.
Broad St.
ermont Ave.
Lincoln Ave.
HER,
outh 6th St.
eymour Ave.
Parker St.
751 High St.
Waverly Ave.

RESIDENCE.

40 Park Pl.
Renner Ave.
South 10th St.
Lafayette St.
North Seventh St.

The Essex Press

Newark, New Jersey

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CITY COUNSEL.....JAMES R. NUGENT, 47 Hill St.
CLERK OF THE BOARD.....WM. E. GREATHEAD, 24 Milford Ave.
ASST. CLERK OF THE BOARD.....ALFRED L. SWAIN, 734 Lake St.
CHIEF ENGINEER.....MORRIS R. SHERRERD, 938 Broad St.
SECRETARY TO CHIEF ENGINEER..JOS. G. WOLBER, 18 Vermont Ave.
GENERAL SUP'T OF WORKS..CHAS. M. SHIPMAN, 106 Lincoln Ave.
ENGINEER AND SUP'T DEP'T OF WATER } GEORGE SANZENBACHER, 276 South 6th St.
ENGINEER, DEP'T OF STREET & HIGHWAYS } *LOUIS C. DITTLER, 130 Seymour Ave.
†WM. A. HOWELL, 684 Parker St.
ENGINEER, DEP'T OF SEWERS & DRAINAGE } EDWARD S. RANKIN, 751 High St.
CASHIER, DEP'T OF WATER..H. D. NORTHROP, 28 Waverly Ave.

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ARTHUR R. DENMAN	40 Park Pl.
FRANK J. BOCK	10 Renner Ave.
AUGUSTUS F. EGGERS	21 South 10th St.
THOMAS F. HALPIN	412 Lafayette St.
GEORGE H. LAMBERT	54 North Seventh St.

*Died August 2nd, 1907.
†Appointed August 15th, 1907.

To the Honorable the Mayor and Common Council of the City of Newark, N. J.:

Pursuant to law, the Board of Street and Water Commissioners of the City of Newark, N. J., hereby presents its annual report, showing the condition of the public works and property of the City under the government, control and management of said Board, for the fiscal year ended December 31st, 1907.

ANNUAL REPORT

OF THE

Board of Street and Water Commissioners

To the Board of Street and Water Commissioners of the City of Newark, N. J.:

GENTLEMEN:—Herewith are transmitted detailed reports of the several departments under the control of your Board for the year ended December 31st, 1907, which have been arranged for presentation to the Mayor and Common Council of the City in accordance with Section 20 of Chapter 134 of the State Laws of 1891.

Respectfully submitted,

MORRIS R. SHERRERD,

Chief Engineer.

ANNUAL REPORT

OF THE

GENERAL SUPERINTENDENT OF WORKS

ANNUAL REPORT

OF THE

General Superintendent of Works

Newark, N. J., December 31st, 1907.

MR. MORRIS R. SHERRERD, CHIEF ENGINEER,

Board of Street and Water Commissioners of the City of the City of Newark, N. J.:

DEAR SIR:—Herewith is submitted the report for the year 1907, the expenses and work performed of the following departments:

Streets and Highways,
Sewers and Drainage,
Repairs to Asphalt Streets,
Public Baths,
Crosswalks,
Sidewalk Repairs,
Public Lighting,
Scavenger,
Bridges,
Wharves.

You will note with the increased appropriation for Streets and Highways, this department was enabled to do more and better work in cleaning, repairing and grading the streets of the city; sweeping the streets by machine has been done almost every week day, when the weather permitted. The block system in cleaning the streets, in addition to cleaning by machine, has been continued and is proving a success.

The expenses of the blacksmith shop and the harness-makers shop have been included in the expenditures of the City Stables, where they properly belong.

REPORT 1907

STREETS AND HIGHWAYS

(Street Cleaning.)

1907.	Weekly Pay Roll	Bills	Monthly Pay Rolls	Total
January	$5,228.00	.....	$401.66	$5,629.66
February	9,394.00	$213.26	401.66	10,008.92
March	11.140.39	270.45	401.66	11,812.50
April	15,250.80	1,684.90	401.66	17,337.36
May	19,712.19	2,046.73	401.66	22,160.58
June	17,937.58	1,222.53	401.66	19,561.77
July	21.298.20	1,115.89	401.66	22,815.75
August	28,226.80	1.507.63	401.66	30,136.09
September	21,057.60	3.614.42	401.66	25,073.68
October	22,112.50	1,493.79	401.66	24,007.95
November	23,361.55	1,849.02	401.66	25,612.23
December	15,699.03	3,288.92	401.74	19,389.69
	$210,418.64	$18,307.54	$4,820.00	$233,546.18

(Street Repairs.)

1907.	Weekly Pay Rolls	Bills	Monthly Pay Rolls	Total
January	$288.37	.....	$276.66	$565.03
February	219.26	$154.53	276.66	650.45
March	269.70	342.62	276.66	888.98
April	1.679.10	173.57	276.66	2,129.33
May	3,167.39	3,156.39	276.66	6,600.44
June	2,641.00	2,178.74	276.66	5,096.40
July	3,290.30	1,903.93	276.66	5,470.89
August	4.303.20	4.258.23	276.66	8,838.09
September	2,977.77	2,348.71	276.66	5,603.14
October	1,950.91	1,846.10	276.66	4,073.67
November	1,870.53	951.27	276.66	3,098.46
December	1,645.40	5,889.92	276.74	7,812.06
	$24,302.93	$23,204.01	$3,320.00	$50,826.94

(City Stables.)

1907.	Weekly Pay Rolls	Bills	Total
January	$668.81	.....	$668.81
February	988.94	$493.97	$1,482.91
March	1,236.00	339.91	1,575.91
April	1,011.60	1,295.27	2,306.87
May	1,262.63	1,365.57	2,628.20
June	944.85	811.12	1,755.97
July	962.00	297.95	1,259.95
August	1,310.55	233.70	1,544.25
September	1,031.05	627.42	1,658.47
October	1,111.40	170.54	1,281.94
November	1,444.35	895.26	2,339.61
December	1,451.95	2,747.51	4,199.46
	$13,424.13	$9,278.22	$22,702.35

(Scavenger.)

1907.	Weekly Pay Roll	Bills	Total
January	$295.60	....	$295.60
February	417.20	....	417.20
March	521.50	48.40	569.90
April	426.20	64.30	490.50
May	554.50	51.70	606.20
June	519.20	168.55	687.75
July	134.30	20.00	154.30
	$2,868.50	$352.95	$3,221.45

(Miscellaneous.)

1907.	Monthly Pay Roll	Bills	Total
January	$83.33	.....	$83.33
February	83.33	.....	83.33
March	83.33	.....	83.33
April	83.33	.....	83.33
May	83.33	.....	83.33
June	83.33	$374.70	458.03
July	83.33	115.70	199.03
August	83.33	485.68	569.01
September	83.33	437.25	520.58

October	$83.33	$124.85	$208.18
November	83.33	5.00	88.33
December	83.37	13.20	96.57
	$1,000.00	$1,556.38	$2,556.38

RECAPITULATION OF DISBURSEMENTS.

Street Cleaning	$233,546.18
" Repairs	50,826.94
City Stables	22,702.35
Scavenger	3,221.45
Miscellaneous	2,556.38
Total disbursements	$312,853.30

STREETS AND HIGHWAYS—1907.

(Street Cleaning.)

	Cubic Yds.	Miles	Cost
Cleaning pavements by machine	30,440	2,193.79	$45,832.67
" block pavements by hand	35,357	2,107.98	52,340.88
" Telford pavements by hand	1,848	106.07	1,648.94
" cobble pavements by hand	4,403	128.09	5,690.95
" asphalt, brick and wood pavements by hand	35,799	8,797.47	42,409.96
" bitulithic pavements by hand	1,742	200.11	1,987.19
" gutters and spots	10,042	.....	12,112.35
" detail (intersections)	603	.....	1,138.16
Picking papers (13,636) bags	.....	.....	1,377.41
City dumps	.....	.....	3,503.13
Carpenter and helper	.....	.....	28.50
Scavenger inspectors	.....	.....	2,868.50
Removing obstructions	.....	.....	622.86
Acting foremen	.....	.....	3,349.31
Removal of snow	83,833	.....	12,405.69
Inspectors on grade crossings	.....	.....	628.75
Detailed drivers and helpers	.....	.....	107.58
Cutting grass	.....	.....	48.35
Cleaning cross walks	.....	.....	62.43
Flushing streets	.....	9.80	62.40
Spreading sand	.....	.....	30.73

	Cubic Yds.	Miles	Cost
Removing trees	.....	.....	$20.85
Miscellaneous	140	.....	231.62
Weekly salaries	.....	.....	24,777.93
Total	204,207	13,543.31	$213,287.14

(Street Repairs.)

	Loads	Miles	Cost
Dirt streets graded and filling depressions	465		$580.18
Dirt streets graded (by machine)		97.14	4,826.37
Surveyor's labor			1,772.50
Carpenter and helper			10.00
Cobble pavements repaired (31 places)			117.97
Block pavements repaired (1,350 places)			8,892.74
Brick pavements repaired (87 places)			477.02
Telford pavements repaired (12 places)			56.90
Bitulithic pavements repaired (7 places)			52.00
Engineer on steam roller			640.85
Keeper of stone yard			702.00
Lampman			728.00
Inspector on repairing pavements			63.33
Flagging city stable yard			21.60
Removing trees			103.15
Cleaning Ogden street			157.20
Moving lamp posts (Sussex avenue)			1.60
Raising manholes (Sussex avenue)			23.25
Telford repairs and oiling Clinton place			281.89
" " " " Elizabeth avenue			571.98
" " " " High street			795.10
" " Orange street			15.45
" " and oiling South Orange avenue			465.80
Oiling Elwood place and Lincoln avenue			9.00
Telford repairs and oiling Sussex avenue			993.20
" " Ogden street			22.55
Miscellaneous			48.55
Weekly salaries			1,872.75
Total			$24,302.93

(City Stables.)

Carpenter and helper	$806.00
Extra laborers	494.44
Horse cleaning	593.44
Painting	493.25
Miscellaneous	1.00
Weekly salaries	11,036.00
Total	$13,424.13

RECAPITULATION OF WEEKLY PAY ROLLS.

Street cleaning	$213,287.14
Street repairs	24,302.93
City stables	13,424.13
Total weekly pay rolls	$251,014.20

COST OF TELFORD REPAIRS ON THE FOLLOWING STREETS.

CLINTON PLACE.

Labor	$484.89
Stone	1,544.40
Oil	53.14
Coal	29.75
Total	$2,112.18

ELIZABETH AVENUE.

Labor	$778.22
Stone	2,214.00
Oil	227.48
Sprinkler	30.00
Coal	40.25
Total	$3,289.95

HIGH STREET.

Labor	$1,209.95
Stone	3,656.43
Oil	407.56
Sprinkler	45.00
Coal	70.75
Total	$5,389.69

SOUTH ORANGE AVENUE.

Labor	$700.86
Stone	936.49
Oil	152.90
Coal	43.50
Total	$1,833.75

ORANGE STREET.

Labor	$20.61
Stone	31.73
Oil	.....
Total	$52.34

LINCOLN AVENUE.

(Oiling only.)

Elwood place (labor)	$6.17
Lincoln avenue (oil)	92.50
Freight	6.00
Total	$104.67

SUSSEX AVENUE.

(Telford Repairs and Oiling.)

Labor	$1,335.63
Stone	4,405.66
Oil	43.18
Coal	101.06
Total	$5,885.53

OGDEN STREET.

Labor	$29.22
Stone	227.37
Total	$256.59

CITY STABLES.

TOTAL COST OF CITY STABLES, HARNESS SHOP, AND BLACKSMITH SHOP, INCLUDING AMOUNTS PAID BY DEPARTMENTS OTHER THAN STREETS AND HIGHWAYS.

Streets and Highways charged directly to this account	$22,702.35
Bills paid by other departments—	
Shade Tree Commission	32.50
Sewers and drainage	2,996.11
Repairs to asphalt streets	776.62
Sidewalks	32.00
Cross walks	32.50
Public lighting	811.96
Total	$27,384.04

CASH RECEIPTS.

1907.

(Street Cleaning.)

Sale of manure	$35.00
Redemption fund	542.80
Removal of snow	569.09
House moving fees	305.00
Unclaimed money	121.62
Sale of old iron	61.40
Sale of old lumber	8.50
Repairs to sweepers	113.75
Sale of old wagons	65.00
Sale of old horse	10.00
Sale of asphalt scrapers	7.25
Sale of old bags	32.00

Board of horses	$1,283.60	
Harness repairs	144.73	
Horse Shoeing	466.56	
Blacksmithing	140.64	
		$3,906.94

(Street Repairs.)

Street openings	$4,128.88	
Street repairs	2,279.35	
Sale of old stone	1,369.05	
Use of steam roller	123.60	
Inspectors on conduits	1,337.88	
Board of Horses	320.90	
Harness repairs	36.18	
Horse Shoeing	116.64	
Blacksmithing	35.16	
		$9,747.64
Total receipts Streets and Highways		$13,654.58

(Street Cleaning.)

Balance 1906	$1,304.55	
Tax Ordinance appropriation	180,000.00	
Supplementary appropriation	30,000.00	
Special appropriation (snow)	10,000.00	
Special appropriation	20,000.00	
Special appropriation	18,000.00	
Receipts 1907	3,906.94	
		$263,211.49

(Street Repairs.)

Tax Ordinance appropriation	$30,000.00	
Special appropriation (Sussex avenue)	10,000.00	
Receipts 1907	9,747.64	
		$49,747.64
Total receipts and appropriations		$312,959.13
Total disbursements		312,853.30
Balance		$105.83

REPORT ON STREET OBSTRUCTIONS.

For the Year Ending December 31st, 1907.

Number of complaints made and investigated	693
Number of obstructions removed by owners	586
Number of obstructions removed by department	107
Number of complaints made in Police Courts	82
Fines imposed in Police Courts	$100.85
Cost of removal of obstructions by department	$436.00

TOTAL DISTRIBUTION OF PAY ROLLS.

1907	Street Cleaning.	Street Repairs.	City Stables.	Scavenger.	Streets and Highways.
January	$ 5,228.00	$ 288.37	$ 668.81	$ 295.60	$ 6,480.78
February	9,394.00	219.26	988.94	417.20	11,019.40
March	11,140.39	269.70	1,236.00	521.50	13,167.59
April	15,250.80	1,679.10	1,011.00	426.20	18,367.70
May	19,712.19	3,167.39	1,262.63	554.50	24,696.71
June	17,937.58	2,641.00	944.85	519.20	22,042.63
July	21,298.20	3,290.30	962.00	134.30	25,684.80
August	28,226.80	4,303.20	1,310.55	.....	33,840.55
September	21,057.60	2,977.77	1,031.05	.....	25,066.42
October	22,112.50	1,950.91	1,111.40	.....	25,174.81
November	23,361.55	1,870.53	1,444.35	.....	26,676.43
December	15,699.03	1,645.40	1,451.95	.....	18,796.38
Total	$210,418.64	$24,302.93	$13,424.13	$2,868.50	$251,014.20

PUMPING STATION. ERECTED A. D. 1887.

SEWERS AND DRAINAGE.

1907.	Cleaning and Repairs.			Pumping Station.			Stable.	Total.
	Weekly Pay Rolls.	Bills.	Monthly Pay Rolls.	Weekly Pay Rolls.	Bills	Monthly Pay Rolls.		
January	$ 1,495.45	---------	$ 301.66	$ 426.00	---------	$ 100.00	---------	$ 2,323.11
February	1,474.42	$ 1,738.75	301.66	568.00	$ 65.54	100.00	---------	4,248.37
March	2,119.18	69.88	301.66	710.00	56.36	100.00	---------	3,357.08
April	2,512.45	1,013.99	301.66	568.00	100.81	100.00	$ 298.24	4,895.15
May	3,689.25	751.59	301.66	710.00	98.21	100.00	---------	5,650.71
June	2,922.68	555.94	301.66	568.00	88.27	100.00	375.00	4,911.55
July	3,088.21	846.52	301.66	568.00	587.05	100.00	765.00	7,256.44
August	3,862.28	466.50	301.66	710.00	44.53	100.00	309.47	5,794.44
September	3,161.57	1,847.05	301.66	568.00	252.57	100.00	355.90	5,586.75
October	4,364.85	1,798.49	301.66	568.00	595.86	100.00	465.00	8,193.86
November	6,046.16	1,482.97	301.66	710.00	687.39	100.00	427.50	9,755.68
December	2,573.86	2,463.89	301.74	710.00	1,800.70	100.00	---------	7,950.19
Total	$37,310.36	$13,035.57	$3,620.00	$7,384.00	$4,377.29	$1,200.00	$2,996.11	$69,923.33

Included in above payments are $3,358.59, the City's proportion of maintenance of joint outlet sewer.

REPORT OF

DEPARTMENT OF SEWERS AND DRAINAGE

	No.	No. feet	Amount
Basins cleaned	[illegible]	[illegible]	[illegible]
Sewers cleaned (needle feet)		[illegible]	[illegible]
Chambers cleaned, pumping station		[illegible]	[illegible]
Repairing, etc., pumping station			[illegible]
Basins repaired			[illegible]
General repairs			[illegible]
Extra sewers and basins (detail men)			[illegible]
Stables cleaned (at [illegible] feet)		[illegible]	[illegible]
Stables repaired			[illegible]
Surveyor's help			[illegible]
Carpenter and helper			[illegible]
Sponge cleaned		[illegible]	[illegible]
Placing new manhole heads on sewers			[illegible]
Removing snow from basins			[illegible]
Repairing manholes			[illegible]
Inspecting brick sewers for repairs			258.00
Building manholes			[illegible]
Men leveling city dumps			500.20
Building basins			516.40
Inspector on Passaic River dredging			84.00
Repairs at Morris avenue bath house			34.50
Repairs at Walnut street bath house			151.75
Repairs at Summer avenue bath house			13.50
Flushing Broad street			12.50
Digging up house connection 404 Bergen street			13.75
Digging test holes			13.50
Extending pipe sewers			21.50
Building window in blacksmith shop			12.50
Rebuilding basin, Ferry and Jackson streets			38.00
Relaying basin connections			35.50
Repairing South street sump			6.25
Building tide gates South street ditch			13.75
Building dumps at pumping station			16.50
Building sump, Frelinghuysen avenue			293.30
Changing flush tank			16.00
Repaving over Cross street sewer			25.65

Repaving over Mt. Prospect place sewer	$73.00
Repaving over Broad street sewer	23.40
Cutting weeds Wheeler Creek ditch	6.75
Repairing culvert Malvern street	10.00
Repairing around manholes and basins	13.00
Leveling Peddie Canal	288.90
Painting carts and tool boxes	58.50
Miscellaneous	28.05
Repairing road at pumping station	80.25
Sewers repaired, viz.—	
Chestnut street	11.50
Broad street	5.70
Mulberry place	5.75
56 Morton street	7.50
Hamburg place	11.50
Ridgewood avenue	258.25
397 Lafayette street	5.10
72 Brunswick street	6.15
Lang street	6.25
Bank street	13.00
Mt. Prospect place	22.50
Seventh avenue	15.60
Badger avenue	176.65
Broome street	12.50
38 Jefferson street	4.50
North Thirteenth street	199.00
Repairing small holes in brick sewers, viz.—	
506 Washington street, Springfield avenue and Eighteenth street, Centre street, Sixteenth avenue, South Orange avenue, High street, Barclay street, Central avenue, Plane street, Belleville avenue, Fourth avenue, Clark street, Walnut street, Ferry street, Seventh avenue	130.25
Service construction	4,775.13
Weekly salaries	14,295.43
Total weekly pay rolls	$44,694.36

CASH RECEIPTS.

1907.

SEWERS AND DRAINAGE.

Sewer taps	$19,500.00
Cleaning basin connections	55.85
Sale of old wagon	4.00
Repairing basin connection	36.00
Relaying basin connection	9.75
Sale of old hose	35.00
Shifting basins	3.50
Sale of old iron	86.95
Sale of horse	35.00
Cleaning private sewer	6.25
Building basins	125.00
Sale of old buggy	5.00
Service construction	4,345.47
Total	$24,247.77

SEWERS AND DRAINAGE.

Balance 1906	$1,209.92	
Tax Ordinance appropriation	40,000.00	
Special appropriation	3,000.00	
Special appropriation	1,800.00	
Receipts 1907	24,247.77	
		$70,257.69

DISBURSEMENTS.

Totals for 1907	$69,923.33
Balance	$334.36

DISTRIBUTION OF PAY ROLLS, SEWERS AND DRAINAGE.

1907.	Foreman.	Inspector of Taps.	Detail.	Carpenter.	Laborers.	Gate Tender.	Pumping Station. Engineer.	Pumping Station. Fireman.	Pumping Station. Sundries.	Pumping Station. Laborers.	Surveyor's Detail.	Sundries.	E. S. Rankin Dept.	Total Pay Roll.
January	$ 180.00	$ 123.21	$ 51.00	$ 51.00	$ 1,001.24	$ 45.00	$ 120.00	$ 216.00	------	$ 90.00	$ 44.00	-----	-------	$ 1,921.45
February	240.00	164.28	68.00	66.00	820.14	60.00	160.00	288.00	------	120.00	56.00	-----	-------	2,042.42
March	300.00	205.35	85.00	69.00	1,314.83	75.00	200.00	360.00	------	150.00	70.00	-----	-------	2,829.18
April	240.00	164.28	68.00	54.00	1,810.17	60.00	160.00	288.00	------	120.00	116.00	-----	-------	3,080.45
May	300.00	205.35	85.00	68.75	2,811.15	75.00	200.00	360.00	------	150.00	144.00	-----	-------	4,399.25
June	240.00	164.28	68.00	50.25	2,265.15	60.00	160.00	288.00	------	120.00	75.00	-----	-------	3,490.68
July	240.00	164.28	68.00	92.00	2,373.93	60.00	160.00	288.00	------	120.00	90.00	-----	-------	3,656.21
August	300.00	205.35	85.00	72.00	2,792.93	75.00	200.00	360.00	190.75	150.00	111.25	30.00	-------	4,572.28
September	240.00	164.28	68.00	36.00	2,150.90	60.00	160.00	288.00	------	111.43	56.00	18.00	376.87	3,729.57
October	240.00	164.28	68.00	40.00	2,327.95	60.00	160.00	288.00	------	120.00	59.00	36.00	1,369.62	4,932.85
November	300.00	205.35	85.00	90.00	2,898.17	75.00	200.00	360.00	------	150.00	70.00	-----	2,322.64	6,756.16
December	300.00	205.71	85.00	72.00	1,060.15	75.00	200.00	360.00	------	150.00	70.00	-----	706.00	3,283.86
Total	$3,120.00	$2,136.00	$894.00	$761.00	$23,626.80	$780.00	$2,080.00	$3,744.00	$190.75	$1,551.43	$961.25	$84.00	$4,775.13	$44,694.36

REPAIRS TO ASPHALT STREETS

1907.	Pay Rolls	Bills	Stable	Total
January	$222.20	.....	.....	$222.20
February	80.00	$252.00	.....	332.00
March	158.35	367.84	.....	526.19
April	640.60	168.72	.....	809.32
May	844.20	2,586.34	.....	3,430.54
June	919.03	1,388.74	.....	2,307.77
July	949.04	1,854.24	$386.62	3,189.90
August	1,042.96	8,597.22	.....	9,640.18
September	846.06	3,992.20	390.00	5,228.26
October	744.06	2,976.31	.....	3,720.37
November	835.11	5,152.17	.....	5,987.28
December	528.78	3,596.82	.....	4,125.60
	$7,810.39	$30,932.60	$776.62	$39,519.61

REPAIRS TO ASPHALT STREETS—1907.

Location of Work	Maintenance	Cuts	Total Sq. Yards
Bank Street	87.55	13.46	101.01
Barclay Street	8.25	1.73	9.98
Blum Street	.....	5.70	5.70
Broad Street	465.58	1,098.60	1,564.18
Bruce Street	56.44	69.55	125.99
Camden Street	47.16	1.96	49.12
Cedar Street	40.03	1.11	41.14
Clifton Avenue	31.48	10.36	41.84
Clinton Avenue	253.71	17.00	270.71
Clinton Street	15.94	7.20	23.14
Court Street	.....	2.88	2.88
East Park Street	277.07	8.93	286.00
Elizabeth Avenue	10.49	6.27	16.76
Fulton Street	35.58	.....	35.58
Fourth Avenue	.....	4.78	4.78
Franklin Street	.....	7.86	7.86
Grant Street	184.24	3.31	187.55
Garside Street	3.56	11.83	15.39
Gould Avenue	65.44	.....	65.44
Gouverneur Street	.....	5.49	5.49
Harvey Street	36.42	.....	36.42

Location of Work	Maintenance	Cuts	Total Sq. Yards
Holland Street	12.36	7.64	20.00
Humboldt Street	1.53	4.92	6.45
Halsey Street	584.16	83.15	677.31
Littleton Avenue	9.92	21.38	31.30
Lincoln Park	3.75	.....	3.75
Lafayette Street	6.23	1.51	7.74
Library Court	12.22	.....	12.22
Murray Street	.69	.....	.69
Mt. Prospect Avenue	35.94	.....	35.94
Milford Avenue	.....	7.16	7.16
Monmouth Street	.55	2.41	2.96
Morton Street	10.21	10.97	21.18
Myrtle Avenue	.....	8.53	8.53
Milton Street	2.14	.....	2.14
North Canal Street	285.66	5.11	290.77
Newton Street	14.74	15.10	29.84
North Sixth Street	205.87	1.06	206.93
North Seventh Street	428.51	77.09	505.60
New Street	514.63	19.69	534.32
Ninth Avenue	.....	3.59	3.59
Nursery Street	17.55	.....	17.55
Nutria Street	.....	12.89	12.89
Orchard Street	20.88	.....	20.88
Oriental Street	31.31	.....	31.31
Ogden Street	76.61	.....	76.61
Park Place	870.40	69.30	939.70
Pennsylvania Avenue	34.67	3.81	38.48
Parker Street	10.71	10.39	21.10
Pennsylvania R. R. Plaza	.....	1.55	1.55
Quitman Street	17.68	23.00	30.68
South Street	.....	2.82	2.82
South Sixth Street	20.61	.....	20.61
South Seventh Street	572.35	69.31	641.66
South Eighth Street	411.46	59.05	470.51
Sherman Avenue	7.06	5.77	13.83
Somerset Street	1.69	5.92	7.61
Summer Avenue	204.17	5.89	210.06
State Street	76.13	.....	76.13
Sixth Avenue	41.14	50.52	91.66
South Twelfth Street	.....	2.71	2.71
Scott Street	.....	.88	.88

Location of Work	Maintenance	Cuts	Total Sq. Yards
Summit Street	9.16	.....	9.16
Tichenor Street	7.19	1.23	8.42
Thomas Street	11.11	.....	11.11
Thirteenth Avenue	21.52	.....	21.52
Third Street	89.50	79.15	168.65
Third Avenue	272.54	2.21	274.75
Washington Street	300.83	17.61	318.44
Washington Place	179.08	.....	179.08
Washington Avenue	.....	9.34	9.34
William Street	12.16	11.50	23.66
Waverly Avenue	.....	14.26	14.26
Wakeman Avenue	219.31	.....	219.31
Wright Street	9.37	.....	9.37
Warren Street	73.26	.....	73.26
Total square yards	7,368.50	2,006.44	9,374.94

REPAIRS TO ASPHALT STREETS.

The following tabulations will show the general maintenance as per contract with the Standard Bitulithic Company:

	Sq. Yards
Halsey Street	786.23
William Street	57.42
Orange Street	36.77
Clinton Avenue	673.42
Lincoln Park	51.26
Pennsylvania Avenue	452.15
South Street	395.45
Murray Street	80.09
Mott Street	156.02
Wright Street	85.84
Sherman Avenue	236.98
Elizabeth Avenue	30.90
Madison and Belmont Avenues	11.50
Emmet Street	70.22
Orchard Street	002.00
Chestnut Street	37.00
Camp Street	201.00
Bennington Street	27.00
Roseville Street	256.00
Dickey Street	37.00
Thomas Street	301.00

Rose Street	96.00
Waverly Avenue	80.00
Somerset Street	265.00
Barclay Street	480.00
South Sixth Street	897.00
South Seventh Street, Resur	10,947.00
Walnut Street	36.00
Elm Street	135.00
Lafayette Street	573.00
Littleton Avenue	16.00
Monmouth Street	112.00
Thirteenth Avenue	17.00
Total (sq. yds.)	18,262.00
Total amount paid Standard Bitulithic Company	$18,171.76

In connection with the foregoing, there has also been paid on account of the maintenance of asphalt pavements, according to the terms of the contracts for paving certain streets, the following amounts, which were charged to Repairs to Asphalt Streets:

J. R. Shanley	$1,650.75
Barber Asphalt Paving Co	2,334.05
Atlantic Alcatraz Co	714.30
Metropolitan Asphalt Paving Co	1,781.65
	$7,480.75

SUMMARY.

Weekly Pay Roll and Supplies	$13,867.10
Maintenance of Asphalt Pavements as per contract with the Standard Bitulithic Co	18,171.76
Maintenance of Asphalt Pavements as per five year term guarantee on outstanding contracts	7,480.75
Total	$39,519.61

REPAIRS TO ASPHALT STREETS.

RECEIPTS.

Balance, 1906	$1,108.43	
Tax Ordinance Appropriations	40,000.00	
Cash Receipts	5,602.29	
		$46,710.72

DISBURSEMENTS.

Total for 1907	$39,519.61
Balance	$7,191.11

DISTRIBUTION OF PAY ROLL.

REPAIRS TO ASPHALT STREETS.

1907	Foremen.	Laborers.	Drivers.	Horses and Wagon Hire.	Inspection.	Miscellaneous.	Pay Roll.
January	$ 80.00	$ 158.70	$ 21.75	$ 1.75	.....	.....	$ 222.20
February	80.00	.....	.....	.....	.....	.....	80.00
March	100.00	46.35	12.00	.....	.....	.....	158.35
April	80.00	302.25	36.75	$ 54.60	$ 77.00	.....	640.60
May	100.00	548.45	55.75	84.00	56.00	.....	844.20
June	80.00	554.68	43.75	205.60	35.00	.....	919.03
July	80.00	566.89	40.25	191.90	70.00	.....	949.04
August	100.00	654.81	58.20	187.05	42.00	.....	1,042.96
September	80.00	494.41	46.25	162.40	63.00	.....	845.06
October	80.00	472.76	50.00	150.85	.....	$0.45	744.06
November	100.00	509.76	78.75	166.60	.....	.....	855.11
December	100.00	334.42	32.75	61.90	.....	.....	528.78
Total	$1,040.00	$4,684.49	$456.20	$1,267.25	$343.00	$0.45	$7,810.39

PUBLIC BATHS

1907.	Weekly Pay Roll	Bills	Total
January	$110.50	.....	$110.50
February	144.00	14.05	158.05
March	207.00	60.82	267.82
April	627.00	109.03	736.03
May	807.00	266.47	1,073.47
June	627.00	695.95	1,322.95
July	694.75	200.47	895.22
August	947.00	399.50	1,346.50
September	790.00	277.63	1,067.63
October	782.00	121.39	903.39
November	970.00	252.42	1,222.42
December	886.00	1,660.90	2,546.90
	$7,592.25	$4,058.63	$11,650.88

ATTENDANCE.

1907.	Summer Ave.		Walnut St.		Morris Ave.	
	Males	Females	Males	Females	Males	Females
April	1,042	5	1,070	15	966	16
May	1,637	27	1,600	31	1,361	14
June	3,733	309	3,723	295	3,568	158
July	7,640	950	10,580	925	11,119	950
August	5,718	770	6,700	815	7,711	828
September	2,298	160	2,345	175	2,394	101
October	1,073	71	1,088	60	1,020	17
November	324	9	757	10	798	9
December	....	....	415	57	517	....
	23,465	2,301	28,278	2,383	29,454	2,093

Total Males	81,197	
Females	6,777	
		87,974

RECEIPTS FROM USE OF TOWELS, SOAP, [illegible] AND SHOWER BATHS.

Summer Avenue	$185.65
Walnut Street	413.60
Morris Avenue	485.35
Total	$1,084.60

RECEIPTS.

Balance, 1906	$186.49	
Tax Ordinance Appropriation	12,500.00	
Cash Receipts	1,084.60	
		$13,671.09

DISBURSEMENTS.

Total, 1907	$11,350.88
Balance	$2,320.21

DISTRIBUTION OF PAY ROLL.

PUBLIC BATHS.

1907	Supt.	Asst. Supt.	Engineer.	Matron.	Watchman.	Sundries.	Carpenter.	Pay Roll.
January	------	------	$ 2.50	------	$108.00	------	------	$ 110.50
February	------	------	------	------	144.00	------	------	144.00
March	------	------	------	------	180.00	------	$27.00	207.00
April	$ 180.00	$ 180.00	195.00	$ 36.00	36.00	------	------	627.00
May	270.00	225.00	225.00	60.00	------	------	27.00	807.00
June	216.00	180.00	180.00	48.00	------	------	3.00	627.00
July	243.00	201.25	202.50	48.00	------	------	------	694.75
August	315.00	262.50	262.50	60.00	------	$ 40.00	7.00	947.00
September	252.00	210.00	210.00	48.00	------	56.00	14.00	790.00
October	252.00	210.00	210.00	48.00	------	56.00	6.00	782.00
November	315.00	262.50	262.50	60.00	------	70.00	------	970.00
December	285.00	237.50	237.50	60.00	------	66.00	------	885.00
Total	$2,328.00	$1,968.75	$1,987.50	$468.00	$468.00	$288.00	$84.00	$7,592.25

SIDEWALKS

1907.	Weekly Pay Rolls	Bills	Stable	Total
January	$105.00	.....	.....	$105.00
February	140.00	406.85	.....	546.85
March	175.00	460.25	.....	635.25
April	140.00	30.00	.....	170.00
May	175.00	170.99	.....	345.99
June	140.00	122.35	.....	262.35
July	140.00	346.99	.....	486.99
August	145.00	458.50	.....	603.50
September	140.00	732.01	.....	872.01
October	140.00	815.36	.....	955.36
November	179.75	2,010.29	32.00	2,222.04
December	631.67	2,293.91	.....	2,925.58
	$2,251.42	$7,847.50	$32.00	$10,130.92

REPORT OF SIDEWALKS FOR 1907.

	Sq. Ft.
New walks laid by property owners	30,000
Walks relaid by property owners	415,118
Concrete walks laid by property owners	560,803
New walks laid by order of the Board	37,196
Walks relaid by order of the Board	15,150
New walks laid by ordinance as per contract	144,562
Concrete walks laid by ordinance as per contract	20,000
Total	1,222,829
Curb reset by property owners	405 Lineal Ft.
Sidewalks inspected	78 Miles

RECEIPTS.

Balance, 1906	$4,502.69	
Tax Ordinance Appropriation	2,000.00	
Cash Receipts	3,882.57	
		$10,385.26

DISBURSEMENTS.

Total, 1907	$10,130.92
Balance	$254.34

DISTRIBUTION OF PAY ROLL.

SIDEWALKS.

1907.	Inspector	Assistant Inspector	Sundries	Special Inspectors	Pay Roll
January	$60.00	$45.00	.....	.....	$105.00
February	80.00	60.00	.....	.....	140.00
March	100.00	75.00	.....	.....	175.00
April	80.00	60.00	.....	.....	140.00
May	100.00	75.00	.....	.....	175.00
June	80.00	60.00	.....	.....	140.00
July	80.00	60.00	.....	.....	140.00
August	60.00	85.00	.....	.....	145.00
September	80.00	60.00	.....	.....	140.00
October	80.00	60.00	.....	.....	140.00
November	100.00	75.00	4.75	.....	179.75
December	106.67	80.00	.....	445.00	631.67
Totals	$1,006.67	$795.00	$4.75	$445.00	$2,251.42

SCAVENGER

The following are the number of cubic yards of Ashes and Rubbish, the number of tons of Garbage, also the number of tons of Paper collected during the year 1907:

1907	Ashes and Rubbish		Garbage		Paper		
January	37,530	cu. yds.	1,420	tons.	23,530	lbs.	paper
February	35,350	"	1,472	"	27,000	"	"
March	35,170	"	1,384	"	29,940	"	"
April	31,360	"	1,370	"	31,200	"	"
May	30,418	"	1,348	"	33,170	"	"
June	27,140	"	1,800	"	29,175	"	"
July	25,751	"	2,020	"	28,200	"	"
August	29,810	"	2,371	"	29,400	"	"
September	28,550	"	2,530	"	30,000	"	"
October	33,460	"	2,485	"	31,200	"	"
November	35,150	"	1,307	"	23,000	"	"
December	37,000	"	1,311	"	22,400	"	"
	385,200	"	21,018	"	335,215	"	"

SCAVENGER.

RECEIPTS.

Tax Ordinance Appropriation	$83,000.00	
Special Appropriation	15,000.00	
		$98,000.00

DISBURSEMENTS.

Total for 1907	$97,715.90
Balance	$284.10

DISTRIBUTION OF PAY ROLL.

SCAVENGER.

1907. INSPECTORS' PAY ROLL.

January	$322.50
February	430.00
March	537.50
April	430.00
May	537.50
June	360.80
July	647.93
August	976.00
September	780.80
October	765.80
November	976.00
December	1,012.60
Total	$7,777.43

CROSS WALKS

1907.	Weekly Pay Roll	Bills	Stable	Total
January	$89.25	.....	.....	$89.25
February	.....	.....	.....	.....
March	8.10	.....	$32.50	40.60
April	333.30	$212.35	.....	545.65
May	471.70	102.85	.....	574.55
June	590.10	73.37	.....	663.47
July	530.10	92.21	.....	622.31
August	561.60	25.75	.....	587.35
September	338.25	22.50	.....	360.75
October	383.65	23.70	.....	407.35
November	331.90	25.00	.....	356.90
December	117.70	168.30	.....	286.00
Totals	$3,755.65	$746.03	$32.50	$4,534.18

CROSS WALKS.

1907.	No. of New Walks Laid	No. of Repairs	Cost
January	2	8	$89.25
February	..	..	.....
March	1	..	8.10
April	1	29	333.30
May	4	50	471.70
June	6	53	590.10
July	..	57	530.10
August	..	70	561.60
September	4	21	338.25
October	6	26	383.65
November	4	21	331.90
December	1	9	117.70
Total	29	344	$3,755.65

RECEIPTS.

Balance, 1906	$553.57	
Tax Ordinance Appropriation	4,000.00	
		$4,553.57

DISBURSEMENTS.

Total, 1907	$4,534.18
Balance	$19.39

GOVERNOR STREET PAVING. LOOKING WEST FROM WASHINGTON STREET. BRICK.

DISTRIBUTION OF PAY ROLL.

1907.	Laborers	Drivers	Horse and Wagon Hire	Pay Roll
January	$65.00	$24.25	.....	$89.25
February	.....	.....	.....	.....
March	5.85	2.25	.....	8.10
April	290.55	42.75	.....	333.30
May	409.45	62.25	.....	471.70
June	494.35	46.25	49.50	590.10
July	426.60	19.50	84.00	530.10
August	472.60	40.50	48.50	561.60
September	288.25	50.00	.....	338.25
October	336.90	46.75	.....	383.65
November	280.65	51.25	.....	331.90
December	83.20	34.50	.....	117.70
Totals	$3,153.40	$420.25	$182.00	$3,755.65

BRIDGES

1907.	Weekly Pay Roll	Bills	Total
January	$24.00	.....	$24.00
February	3.25	282.70	285.95
March	34.00	.....	34.00
April	16.00	70.00	86.00
May	43.00	8.82	51.82
June	145.40	459.55	604.95
July	5.00	83.79	88.79
August	5.00	57.77	62.77
September	83.75	.....	83.75
October	.....	177.32	177.32
November	23.00	92.06	115.06
December	17.50	35.21	52.71
Totals	$399.90	$1,267.22	$1,667.12

RECEIPTS.

Balance, 1906	$1,180.13	
Tax Ordinance Appropriation	1,000.00	
		$2,180.13

DISBURSEMENTS.

Total, 1907	$1,667.12
Balance	$513.01

DISTRIBUTION OF PAY ROLL.

1907.	Carpenter	Laborer	Painter	Sundries	Pay Roll
January	$6.00	$6.00	$12.00	.....	$24.00
February	3.25	.....	.....	.....	3.25
March	18.00	16.00	.....	.....	34.00
April	.....	4.00	12.00	.....	16.00
May	18.00	25.00	.....	.....	43.00
June	54.00	82.25	.....	9.15	145.40
July	.....	.....	.....	5.00	5.00
August	3.00	2.00	.....	.....	5.00
September	42.00	40.50	.....	1.25	83.75
October	.....	.....	.....	.....	.....
November	6.00	17.00	.....	.....	23.00
December	9.00	8.50	.....	.....	17.50
Totals	$159.25	$201.25	$24.00	$15.40	399.90

WHARVES

1907.	Weekly Pay Rolls	Bills	Total
August	.....	$94.60	$94.60
September	54.00	1,147.50	1,201.50
October	18.00	8,300.10	8,318.10
November	.....	.....	.....
December	.....	80.00	80.00
Totals	$72.00	$9,622.20	$9,694.20

Included in above are payments made to P. Sandford Ross for dredging Passaic River, amounting to $9,447.60.

RECEIPTS.

Balance, 1906		$2,721.66
Special Appropriation		10,000.00
Cash Receipts, Rents City Docks	$870.00	
Wharfage	294.00	
		1,164.00
Total		$13,885.66

DISBURSEMENTS.

Total for 1907	$9,694.20
Balance	$4,191.46

RECAPITULATION OF CASH RECEIPTS, 1907.

Streets and Highways	$13,654.58
Sewers and Drainage	24,247.77
House Sewer Connections	250.38
Surveyors' Department	681.83
Wharves	1,164.00
Public Lighting	273.27

1907.	Street Cleaning.	Street Repairs.	City Stables.
January	$ 5,228.00	$ 288.37	$ 668
February	9,394.00	219.26	988
March	11,140.39	269.70	1,236
April	15,250.80	1,679.10	1,011
May	19,712.19	3,167.39	1,262
June	17,937.58	2,641.00	944
July	21,298.20	3,290.30	962
August	28,226.80	4,303.20	1,310
September	21,057.60	2,977.77	1,031
October	22,112.50	1,950.91	1,111
November	23,361.55	1,870.53	1,444
December	15,699.03	1,645.40	1,451
Total	$210,418.64	$24,302.93	$13,424

ELECTRIC LIGHTING.

Arc lamps in use December 31, 1906		2,235
" " installed during year	171	
" " discontinued during year	4	
		167
Arc lamps in use December 31, 1907		2,402
Increase		167

STATISTICS REGARDING DISTRIBUTION SYSTEM.

MAINS.

Kind of pipe.....cast iron and steel
Sizes, from .....4 inch to 60 inch
Extended .....62,034 feet during the year
Discontinued .....0 feet during the year
Total now in use.....352 $\frac{3577}{5280}$ miles
Cost of repairs per mile.....$2.40
Length of pipe less than 4 inches diameter.....800 feet
Number of hydrants added during the year (public and private) 202
Number of hydrants (public and private) now in use..2751
Number of stop gates added during year.....394
Number of stop gates now in use.....4709
Number of stop gates smaller than 4 inch.....4
Range of pressure on distributing mains.....25 to 75 lbs.
Range of pressure on high pressure system....90 to 160 lbs.

SERVICE.

Kind of pipe.....lead and cast iron
Sizes .....⅝ inch to 6 inch
Extended .....56,468 feet.
Total now in use.....168 miles
Number of service taps added during year.....2,694
Number now in use 44,304
Average length of service.....20 feet
Average cost of service for the year.....$13.82
Number of meters added.....1,271
Number now in use.....19,681
Percentages of services metered.....44.5%
Percentage of receipts from metered water.....69%

RECAPITULATION OF CASH RECEIPTS, 1907.

Streets and Highways	$13,654.58
Sewers and Drainage	24,247.77
House Sewer Connections	250.38
Surveyors' Department	681.83
Wharves	1,164.00
Public Lighting	273.27
Public Baths	1,284.60
Repairs to Asphalt Streets	5,602.29
Total Receipts	$47,158.72

REPORT OF ELECTRICAL MACHINIST

STREET RAILWAYS.

Flat wheels removed		178
Defective fenders removed		164
Defective cars removed		44
		386
Closed cars in use, 1906	455	
Open cars in use, 1906	150	
	605	
Closed cars in use, 1907	472	
Open cars in use, 1907	190	
	662	
Increase of cars in service		57

DEPARTMENT OF PUBLIC LIGHTING

This Department has the care of 2,402 Electric Arc Lamps, 179 Electric Incandescent Lamps, and 2,032 Gas Lamps, a total of 4,613 lamps.

ELECTRIC LIGHTING.

Arc lamps in use December 31, 1906		2,235
" " installed during year	171	
" " discontinued during year	4	
		167
Arc lamps in use December 31, 1907		2,402
Increase		167

These 167 new arcs have been installed in such location as an absolute need for them seemed to demand.

Outages reported during the year were 33,911 lamp-hours, for which a pro rata deduction was made.

Arc lamps are of nominal 2,000 candle power.

Contract requirements are 450 watts of electrical energy at lamp terminal.

The lamps in use are the General Electric, alternating current.

Lamps burn 4,000 hours, and have cost $95.00 per lamp per annum, to June 1st, 1907.

On June 1st, 1907, the cost was reduced to $75.00 and will be further reduced on Sept. 1st, 1908, to $70.00, under a new contract, to run until Sept. 1st, 1912.

The Company sets all the arc lamp poles as located and ordered by the Superintendent of Lighting, and is required to keep and maintain all lamp poles, lines and lamps used for the city's lighting in good condition, to the satisfaction of the Superintendent.

One hundred and ninety-three arc lamps are connected with the underground service in the following streets:

Market Street, from P. R. R. to Court House Square.
Springfield Avenue, from Market Street to Bergen Street.
Broad Street, from Clay to Court Streets.
Ferry Street, from P. R. R. to Hamburg Place.
Halsey Street, from Market Street to Central Avenue.
Washington Street, from Market Street to Bank Street.
Mulberry Street, from Canal Street to Mechanic Street.
Mechanic Street, from Mulberry Street to Broad Street.
Clinton Street, from Mulberry Street to Broad Street.
Bank Street, from Broad Street to Washington Street.
Beaver Street.
Academy Street, from Broad Street to Halsey Street.
West Park Street, from Broad Street to Halsey Street.
New Street, from Broad Street to Halsey Street.
Central Avenue, from Broad Street to Halsey Street.
Cedar Street, from Broad Street to Halsey Street

ELECTRIC INCANDESCENTS.

Electric incandescents in use December 31st, 1906		182
Installed during the year	26	
Discontinued during the year	29	
In use December 31st, 1907		179
Decrease		3

Electric incandescents are of 32 candle power, burn 4,000 hours, and cost $15.00 per lamp per year.

GAS LIGHTING.

Gas lamps in use December 31, 1906		2,103
" " lighted during year	26	
" " relighted during year	10	
" " discontinued during year	107	
" " in use December 31, 1907		2,032
Decrease		71

Electric lighting was substituted for the 107 gas lamps that have been discontinued.

Outages reported during the year were 3,757 gas lamps, or 46,096 lamp-hours, for which a pro rata deduction was made.

The lamps in use are the square street lamps and Miners No. 2 globe lamps. The burner is a 4 foot open flat flame.

Lamps burn 4,000 hours, and cost $19.00 per lamp per year.

The gas furnished during the year averaged 20 candle-power.

Contract requirements are 14 candle-power.

The contract for gas lighting will expire March 1, 1908.

The contractor furnishes the gas, burners, and lamp lighters, and the city furnishes the lamps and lamp posts, and provides for the setting of the lamp posts, has service pipes laid from the gas mains to the top of lamp posts, and maintains all such lamps, service pipes and posts in good repair.

There is one gas lamp in use for the purpose of indicating the location of a fire alarm signal box on the corner of Broad and Green Streets, and two others, one on the corner of Broad and Mechanic Streets, and one on the junction of Springfield and South Orange Avenues, have been connected with the gas mains and are ready to be installed.

Attention was given 11,966 gas lamps during the year. Considerable of this work was thawing out frozen lamps during the severe cold weather of the months of January and February.

Six thousand three hundred and forty-nine lights of glass have been put in 4,383 lamps. A large number of these lights of glass were broken by boys with slung shots, air rifles and other missiles.

Four hundred and forty-one globes, and 598 new lever street lamp cocks, have been placed on lamps.

Eight lamp posts have been reset to curb and street line, and twenty-seven straightened.

Seventy-three leaky service pipes have been repaired, and eighteen cleared.

One hundred and sixteen lanterns have been repaired and 517 painted.

The gas company extended its mains for street lighting on Delancy Street, south of Pacific, and on Brookdale Avenue, south of South Orange Avenue.

The candle-power of the gas during the year was: Highest, 23.5; lowest, 16; average, 20 candles.

The pressure of the gas was: Highest, 3.60 inches; lowest, 1.90 inches; average, 2.59 inches.

The total number of meters tested during the year was 4,114, of these 48 were incorrect.

The following table shows the total number of lamps in use each year as per annual report since 1900:

	Electric Arc Lamps	Electric Incandescent Lamps	Gas Lamps	Total	Annual Increase
Dec. 31, 1900	1725	12	2,009	3,746	...
1901	1794	9	2,074	3,877	131
1902	1859	60	2,180	4,099	222
1903	1973	61	2,155	4,189	90
1904	2038	87	2,139	4,264	75
1905	2154	170	2,131	4,455	191
1906	2235	182	2,103	4,520	65
1907	2402	179	2,032	4,613	93

Increase since 1900: Arcs, 677; incandescent, 167; gas, 23; total, 867.

DEPARTMENT OF POLES AND WIRES

POLES, CABLE CONDUCTORS AND OPEN WIRES, CONDUITS, DUCTS AND MANHOLES WITHIN THE CITY LIMITS.

PUBLIC SERVICE RAILWAY COMPANY.

	Wood	Iron	
Number of poles December 31, 1906.....	30	4,711	4,741
Number of poles erected during year.....	0	9	
" " " removed during year.....	0	31	
" " " December 31, 1907.....	30	4,689	—4,719
Decrease			22

Number of miles of cable, aerial, December 31, 1907—

1,000,000 C. M.....	24 miles	
750,000 C. M.	12 "	
500,000 C. M.....	70.403 "	
211,600 C. M.....	36.767 "	107.530

Number of miles of cable in subways, Dec. 31, 1907—

1,000,000 C. M.....	17.08 miles	
750,000 C. M.....	1.872 "	
500,000 C. M.....	7.417 "	
1,000,000 C. M. bare copper.	10.141 "	
2/0 3 Conductor.....	11.22 "	47.730

Number of miles of wire—aerial—	
1/0 trolley and 2/0 trolley.....	99.39 miles
Number of miles of conduits Dec. 31, 1906.....	10.84 "
Single duct	145.765 "
Conduits	10.84 "
Single duct	145.765 "
Number of manholes Dec. 31, 1906.....	174
" " " Dec. 31, 1907.....	174

PUBLIC SERVICE CORPORATION ELECTRICAL DEPARTMENT.

	Wood	
Number of poles Dec. 31, 1906	6,108	
Erected during year	367	
Removed	166	
Replaced	168	
Number of poles Dec. 31, 1907		6,475
Increase		367

Number of miles of cable in subways	101.4
" " " " conductors, aerial	674
" " " " conduits Dec. 31, 1906	8.4
" " " " conduits Dec. 31, 1907	9.1
" " " " single ducts Dec. 31, 1906	111.8
" " " " single ducts Dec. 31, 1907	120.56
Number of manholes Dec. 31, 1906	387
" " " Dec. 31, 1907	429

NEW YORK AND NEW JERSEY TELEPHONE COMPANY.

	Wood	Iron
Number of poles Dec. 31, 1906	3,785	1—3,786
" " " erected during year	95	
" " " removed during year	30	
" " " replaced during year	137	
" " " Dec. 31, 1907	3,818	1—3,819
Increase		33

Number of miles of cable, aerial, Dec. 31, 1907	16.54
" " " " cables in subways	83.58
" " " " conductors, aerial, Dec. 31, 1907	920.49
" " " " conductors in subways	36,982.90
" " " " conduits Dec. 31, 1906	40.894
" " " " conduits Dec. 31, 1907	50.19
" " " " single ducts Dec. 31, 1906	230.686
" " " " single ducts Dec. 31, 1907	346.28
Number of manholes Dec. 31, 1906	540
" " " Dec. 31, 1907	695

WESTERN UNION TELEGRAPH COMPANY.

Number of poles Dec. 31, 1906, wood	458	
Erected during year	8	
Number of poles Dec. 31, 1907	466	
Number of poles along railroads Dec. 31, 1907	521—	987
Number of miles cables, aerial, Dec. 31, 1907	5.55	
Number of miles cables, aerial, along railroads Dec. 31, 1907	13.98—	19.53
Number of miles conductors, aerial, Dec. 31, 1907	181.5	
Along railroads	414.10—	595.60

NEWARK TELEPHONE COMPANY.

Number of poles Dec. 31, 1906, wood	449
Replaced during year	1
December 31, 1907	449
Number of miles of cables, aerial, Dec. 31, 1907	2
Cables in subways Dec. 31, 1907	18.70
Conductors, aerial	17.31
In subways	2334
Conduits Dec. 31, 1906	922
Conduits Dec. 31, 1907	922
Single ducts Dec. 31, 1906	44.64
Single ducts Dec. 31, 1907	44.64
Number of manholes Dec. 31, 1906	86
Number of manholes Dec. 31, 1907	86

NORTHEASTERN TELEPHONE AND TELEGRAPH COMPANY.

Number of poles Dec. 31, 1907, wood	251
Number of miles of cables in subways	3.25
" " " " conductors, aerial	304.4
" " " in subways	643.50

POSTAL TELEGRAPH CABLE COMPANY.

This company has no poles; uses poles of Public Service Corporation of N. J., and ducts of the N. Y. & N. J. Tel. Co.

Number of miles of conductors, aerial, Dec. 31, 1907	125
In subways, Dec. 31, 1907	30

NEWARK DISTRICT TELEGRAPH COMPANY.

Number of poles Dec. 31, 1906	4
Erected during year	1
Number of poles December 31, 1907	5
Increase	1
Number of miles of cable, aerial, Dec. 31, 1907	.75
Cable in subways	2.25
Conductors, aerial	8
Conductors in subways	221

Company uses ducts of Telephone Companies.

POLICE DEPARTMENT SIGNAL SERVICE.

Maintained by N. Y. & N. J. Telephone Co.

Number of poles Dec. 31, 1906, wood	115
Erected during year	2
Dec. 31, 1907	117
Number of miles of cables, aerial, Dec. 31, 1907	.5
In subways Dec. 31, 1907	9.96
Open wire	170.2
Conductors, aerial	180.2
Conductors in subways	104.94

FIRE DEPARTMENT SIGNAL SERVICE.

Number of poles Dec. 31, 1906, wood	670
Erected during year	2
Removed during year	12
Number of poles Dec. 31, 1907	660
Decrease	10
Number of miles of cable, aerial, Dec. 31, 1907	.5
In subways Dec. 31, 1907	19.76
Number of miles of conductors, aerial, Dec. 31, 1907	144.
In subways Dec. 31, 1907	192.97

SUMMARY.

Total number of poles, wood	12,762	
" " " " iron	4,690	17,452
Total number of miles of cable, aerial	147.410	
" " " " " " in subways	286.630	434.04
" " " " " conductors, aerial	4751.79	
" " " " " conductors in subways	40,529.27	45,281.06
" " " " " conduits		79.35
" " " " " single ducts		657.245

Public Service Corp. of N. J.—Street Ra	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Public Service Corp. of N. J.—Electrical	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
New York and New Jersey Telephone (	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Newark Telephone Company	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Western Union Telegraph Company	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Northeastern Telephone and Telegraph	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Postal Telegraph Cable Company	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Newark District Telegraph Company	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Police Department Signal Service	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Fire Department Signal Service	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Total	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

NEWARK DISTRICT TELEGRAPH COMPANY.

Number of poles Dec. 31, 1906	4
Erected during year	1
Number of poles December 31, 1907	5
Increase	1
Number of miles of cable, aerial, Dec. 31, 1907	.75
Cable in subways	2.25
Conductors, aerial	8
Conductors in subways	221

Company uses ducts of Telephone Companies.

POLICE DEPARTMENT SIGNAL SERVICE.

Maintained by N. Y. & N. J. Telephone Co.

Number of poles Dec. 31, 1906, wood	115
Erected during year	2
Dec. 31, 1907	117
Number of miles of cables, aerial, Dec. 31, 1907	.5
In subways Dec. 31, 1907	9.96
Open wire	170.2
Conductors, aerial	180.2
Conductors in subways	104.94

FIRE DEPARTMENT SIGNAL SERVICE.

Number of poles Dec. 31, 1906, wood	670
Erected during year	2
Removed during year	12
Number of poles Dec. 31, 1907	660
Decrease	10
Number of miles of cable, aerial, Dec. 31, 1907	.5
In subways Dec. 31, 1907	19.76
Number of miles of conductors, aerial, Dec. 31, 1907	144.
In subways Dec. 31, 1907	192.97

Fund for the Construction of a Storage Reservoir

December 31st, 1907.

CASH ACCOUNT.

Balance January 1, 1907		$55,392.78
Rents, Real Estate	$250.00	250.00
Balance to credit of account with City Treasurer, December 31, 1907		$55,142.78

TRIAL BALANCE.

Cash		$55,142.78	
Ivy Hill Property		81,828.40	
Belleville Property		13,965.35	
Charlottesburgh Property		50,670.07	
253 Acres of Land in the Pequannock Water Shed		3,250.00	
Land Purchased for Pequannock Water Shed:			
From R. F. Baxter	$800.00		
" J. R. Riggs	12,500.00		
" Society Land Co.	259.86		
" J. T. Riordan	2,135.00		
" D. B. Ross	8,000.00		
" A. A. Edsall	1,354.40		
		25,049.26	
Expense Searching Titles		295.07	
Storage Reservoir Account			230,200.93
		$230,200.93	$230,200.93

REAL ESTATE AND SECURITIES.

Ivy Hill Property, South Orange, N. J.	$81,828.40
Belleville, N. J., Property	13,965.35
Charlottesburgh, N. J., Property	50,670.07
253 Acres of Land in Pequannock Water Shed	3,250.00
Land Purchased for Pequannock Water Shed	25,049.26
Expenses for Searching	295.07
Total	$175,058.15

STATEMENT OF OUTSTANDING WATER BONDS, NOVEMBER 30, 1907.

Month.	Date of Act.	Year of Issue.	Title.	When Due.	Amount.	Rate of Int.	Yearly Interest.	Interest Due.	Rate of Sinking Fund.	Annual Sinking Fund Payments.	Amount in Sinking Fund Nov. 30, 1907.
April 21	1876	1879	Water	1909	$ 100,000.00	5 %	$ 5,000.00	May and Nov.	None		
March 6	1884	Oct. 1, 1884	"	1914	30,000.00	4 %	1,200.00	April " Oct.	3% City	Pays.	$ 30,746.91
March 6	1884	Feb. 1, 1885	"	1915	200,000.00	4½%	9,000.00	Feb. " Aug.	3% "	"	187,809.97
March 6	1884	Oct. 31, 1885	"	1913	15,000.00	4½%	675.00	May " Nov.	3% "	"	14,008.53
March 6	1884	Aug. 1, 1886	"	1916	12,000.00	4 %	480.00	Feb. " Aug.	3% "	"	10,244.73
March 6	1884	April 1, 1887	"	1917	15,000.00	4 %	600.00	April " Oct.	3% "	"	11,890.31
March 6	1884	March 1, 1888	"	1918	20,000.00	4½%	900.00	March " Sept.	3% "	"	14,690.36
March 20	1888	Dec. 29, 1888	"	1908	20,000.00	4 %	800.00	June " Dec.	3%	Water Dept. Pays.	$600.00 16,675.58
March 20	1888	Dec. 30, 1890	"	1910	20,000.00	4 %	800.00	June " Dec.	3% "	" 600.00	14,372.87
March 20	1888	Sept. 15, 1891	"	1911	70,000.00	5 %	3,500.00	March " Sept.	3% "	" 2,100.00	44,135.54
March 20	1888	Oct. 10, 1892	"	1912	20,000.00	4 %	800.00	April " Oct.	3% "	" 600.00	11,594.09
March 20	1888	Nov. 15, 1893	"	1913	55,000.00	4 %	2,200.00	May " Nov.	3% "	" 1,650.00	29,435.63
March 20	1888	Aug. 21, 1895	"	1915	40,000.00	4 %	1,600.00	Feb. " Aug.	3% "	" 1,200.00	17,536.11
March 20	1888	Oct. 20, 1896	"	1916	40,000.00	4 %	1,600.00	April " Oct.	3% "	" 1,200.00	15,792.07
May 14	1889	Feb. 1, 1892	Funded Water Debt	1922	2,450,000.00	4 %	98,000.00	Feb. " Aug.	2% "	" 49,000.00	946,922.59
May 14	1889	May 1, 1892	New Water Supply	1972	4,000,000.00	4 %	160,000.00	May " Nov.	2% "	" 80,000.00 }	1,859,275.54
May 14	1889	Nov. 1, 1900	"	1972	2,000,000.00	4 %	80,000.00	May " Nov.	2% "	" 40,000.00 }	
May 14	1889	Aug. 1, 1897	Funded Water Debt	1927	100,000.00	4 %	4,000.00	Feb. " Aug.	2% "	" 2,000.00	23,516.00
May 18	1898	Oct. 18, 1899	Water	1949	20,000.00	4 %	800.00	Feb. " Aug.	3% "	" 600.00	5,456.45
May 18	1898	Aug. 1, 1900	"	1939	20,000.00	4 %	800.00	April " Oct.	3% "	" 600.00	4,699.18
May 18	1898	Sept. 1, 1901	"	1931	20,000.00	4 %	800.00	March " Sept.	3% "	" 600.00	3,955.20
May 18	1898	Oct. 1, 1902	Street Main Extension	1932	30,000.00	4 %	1,200.00	April " Oct.	3% "	" 900.00	3,851.16
May 18	1898	July 1, 1903	"	1923	30,000.00	4 %	1,200.00	Jan. " July	3% "	" 900.00	4,331.08
	1905	Aug. 1, 1904	High Pressure, 30 Years	1934	100,000.00	3½%	3,500.00	Feb. " Aug.	2% "	" 2,000.00	6,237.14
	1905	April 1, 1905	Cedar Grove Reservoir	1955	1,950,000.00	3½%	68,250.00	April " Oct.	1% "	" 19,500.00	60,812.15
	1905	May 1, 1905	Street Main Extension	1925	50,000.00	4 %	2,000.00	May " Nov.	3% "	" 1,500.00	4,677.86
	Rw'nl 1875	May 1, 1905	Water	1955	490,000.00	3½%	17,150.00	May " Nov.	1% "	" 4,900.00	15,281.00
		Oct. 1, 1898	Vailsburgh Water Bond, 15 Years	1913	20,000.00	4½%	900.00	April " Oct.	5% "	" 1,000.00	6,098.25
		Oct. 1, 1898	Bond, 30 Years	1978	20,000.00	4½%	900.00	April " Oct.	2% "	" 400.00	2,757.27
					$11,057,000.00		$468,655.00			$211,850.00	$5,367,364.47

The Water Department pays both Interest and Sinking funds on Bonds issued under acts of 1875 (Renewal), 1888, 1889, 1898 and 1905, and interest on Bonds issued under the acts of 1876 and 1884. These payments amounted to a total fixed charge for the year 1907 of $680,505.00.

SUMMARY.

Total number of poles, wood	12,762	
" " " " iron	4,690	—17,452
Total number of miles of cable, aerial	147.410	
" " " " " " in subways	286.630	— 434.04
" " " " " conductors, aerial	4751.79	
" " " " " conductors in subways	40,529.27	—45,281.06
" " " " " conduits		79.35
" " " " " single ducts		657.245
Total number of manholes		1,384

PUBLIC LIGHTING.

RECEIPTS.

Balance 1906	$2,089.43	
Tax Ordinance appropriation	185,000.00	
Supplementary appropriation	50,000.00	
Special appropriation	6,000.00	
Receipts (1907)	273.27	
		$243,362.70

DISBURSEMENTS.

Total for 1907	$242,426.39
Balance	936.31

Respectfully submitted,

C. M. SHIPMAN,

General Supt. of Works.

CEDAR GROVE RESERVOIR—SHOWING WEST DAM AND OUTLET GATEHOUSE.
Capacity of reservoir 679,000,000 gallons. Area of water surface 100 acres. Elevation of flow line 405 feet.

ANNUAL REPORT

OF THE

Engineer and Superintendent of the Department of Water

ANNUAL REPORT

OF THE

Engineer and Superintendent of the Department of Water

Mr. Morris R. Sherrerd, Chief Engineer, Board of Street and Water Commissioners of the City of Newark, N. J.

DEAR SIR:—Herewith is submitted the report of the condition and operation of the work of the Department of Water for the year ended December 31st, 1907.

WATERSHED.

The superintendent of the watershed, reports that during the year 1907, the storage reservoirs in the watershed have been made free of drift wood, brush, &c. Some paving was done on top of spillway of the Oak Ridge Reservoir. The water was let out of pond above the diverting dam at Echo Lake, and this dam was repaired, the up and down stream side pointed up and also some coping repaired on top. In order to protect a tract of young timber which is situated near the line of the N. Y. S. & W. R. R. from forest fires, all brush and briars have been cut away. The inlet gates of the two 48-inch mains at Macopin Intake have been shut down twice during the year in order to prevent muddy water from being sent to the Cedar Grove Reservoir and from entering the distribution system of the city.

During the year the Water Department purchased in the Pequannock watershed six parcels of land embracing about 1,033 acres at a cost of $28,049.40. This land was partly acquired for the better protection of the water supply and for other important reasons given below.

The Baxter property, located in the Township of Vernon, Sussex County, 80.71 acres, cost $800.00, or $10.00 per acre. This is a tract of woodland adjacent to Canistear Reservoir and lying between two city properties, was purchased to establish a price, as this was the most reasonable figure at which land had ever been offered to the City in the watershed.

The Jetur R. Riggs property, located in the township of Jefferson, Morris County, adjacent to Oak Ridge Reservoir, including farmhouse and barn consisting of 312 acres, cost $12,500. This tract was one of three remaining tracts not owned by the city which would be flowed by the raising of the Oak Ridge Reservoir dam, leaving about 30 acres to be purchased in order to accomplish the raising of this reservoir 10 feet, thus doubling its capacity.

The Society Land Company, in West Milford Township, Passaic County, embraced 253 acres and cost $3,250, or about $13.00 per acre. This tract lies at Charlotteburg, extending from the main road to Echo Lake. It dovetailed in with other pieces of land acquired from the East Jersey Water Company under the land for water agreement, and included several mineral rights.

The Daniel B. Ross tract, in the township of Hardyston, Sussex County, of 240 acres, cost $8,000, or $33.33 per acre. This farm includes dwelling house and barn and is situated near the village of Stockholm. It covers the site of a dam which could be cheaply built and a pond about one mile in extent would thereby be obtained. While the advantage to the development of the watershed by the construction of a reservoir at this point might be little on account of

PUBLIC LIBRARY

ASTOR, LENOX AND
TILDEN FOUNDATIONS

CEDAR GROVE RESERVOIR—SHOWING WEST DAM.

Length of dam 2,500 feet. Height of dam 65 feet. Height of corewall (deepest place) 105 feet. Depth of water 50 feet.

the limited watershed tributary to the same, the possibility of its development for a fishing preserve or its construction as an annoyance to the city was so great that the purchase was no doubt of great advantage to the city.

The Alice Edsall tract, in the Township of Vernon, Sussex County, included 68 acres, costing $1,354.40, or about $20.00 per acre. This purchase covers the outlet to a large flat tract of land, where a dam 30 feet high would only be about 200 feet long on top and a reservoir covering about 200 acres could be cheaply constructed. This reservoir site has the advantage of considerable watershed and the construction of a dam is so cheap that the additional storage obtained would be very reasonable.

The John T. Reardon tract in the Township of Hardyston, Sussex County, near Stockholm, consists of 80 acres, cost $2,135, or $26.69 per acre. This land lies along the railroad where the construction of ice ponds have been proposed.

CEDAR GROVE RESERVOIR.

The keeper of this reservoir states that besides the regular routine work, keeping the dams in shape, attending to screens in gate houses, &c., the road around the reservoir on the north, east and south side was given a top dressing. The distributing system of the city was supplied during the entire year from Cedar Grove reservoir. On two occasions the water from the intake was shut off for a few days, the entire supply for the city during that time being taken from this reservoir.

No complaint of muddy or roily water has been received during the entire year throughout the city, which may be attributed to the fact that this large receiving and distributing reservoir, as was intended, acts as a settling basin, and the reports from the Newark Board of Health in regard to the examination of the water show that the storage

of the twenty days which is obtained by the use of Cedar Grove Reservoir materially improves the quantity of the water delivered to the city and has given results equivalent to filtration in reducing the number of bacteria in the water.

The fence along the reservoir on the east side should be reset and repainted during the coming year.

DISTRIBUTING RESERVOIRS.

BELLVILLE RESERVOIR.

This reservoir has been in good condition for years, although it would be advisable during the coming year to draw off the water in order that the same may be cleaned and pointed up.

LOW SERVICE RESERVOIR.

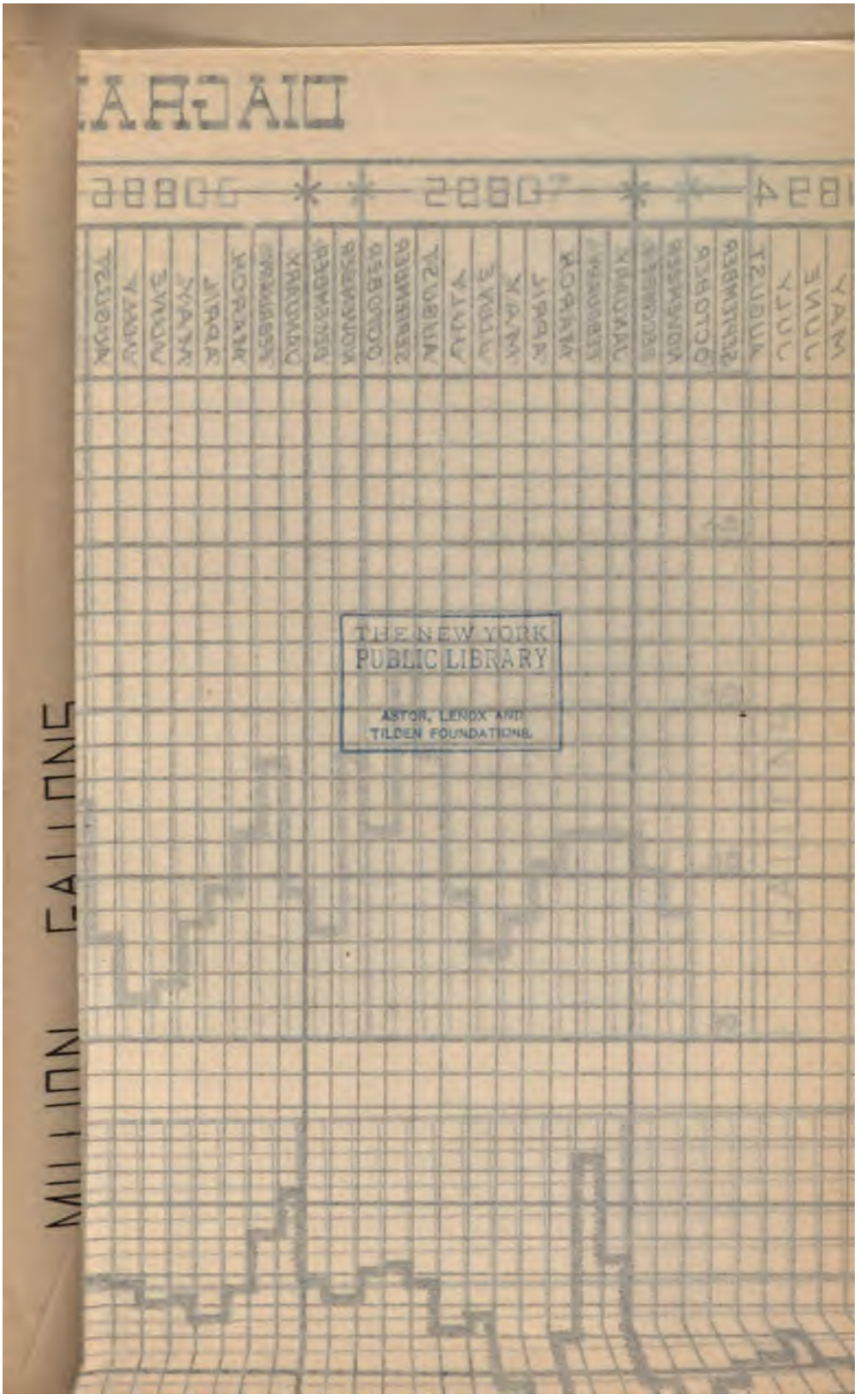
at 7th and Clifton Avenues.

The thorough repairs made on this reservoir some years ago seem to have been effective, as there has been no trouble with this reservoir since that time in regard to leaks, &c. The water level is kept at 109.00 above sea. It might be advisable to draw off the water in this reservoir in order to investigate the bottom regarding leaks, etc., and have the walls pointed up.

HIGH SERVICE RESERVOIR.

South Orange Avenue and South 9th Street.

The good and long record of this reservoir has been kept up. It was the intention this year to have this reservoir drawn off, cleaned and side walls pointed up, but owing to the great amount of work on hand it was impossible to do so, but this matter ought to receive attention during the coming year.



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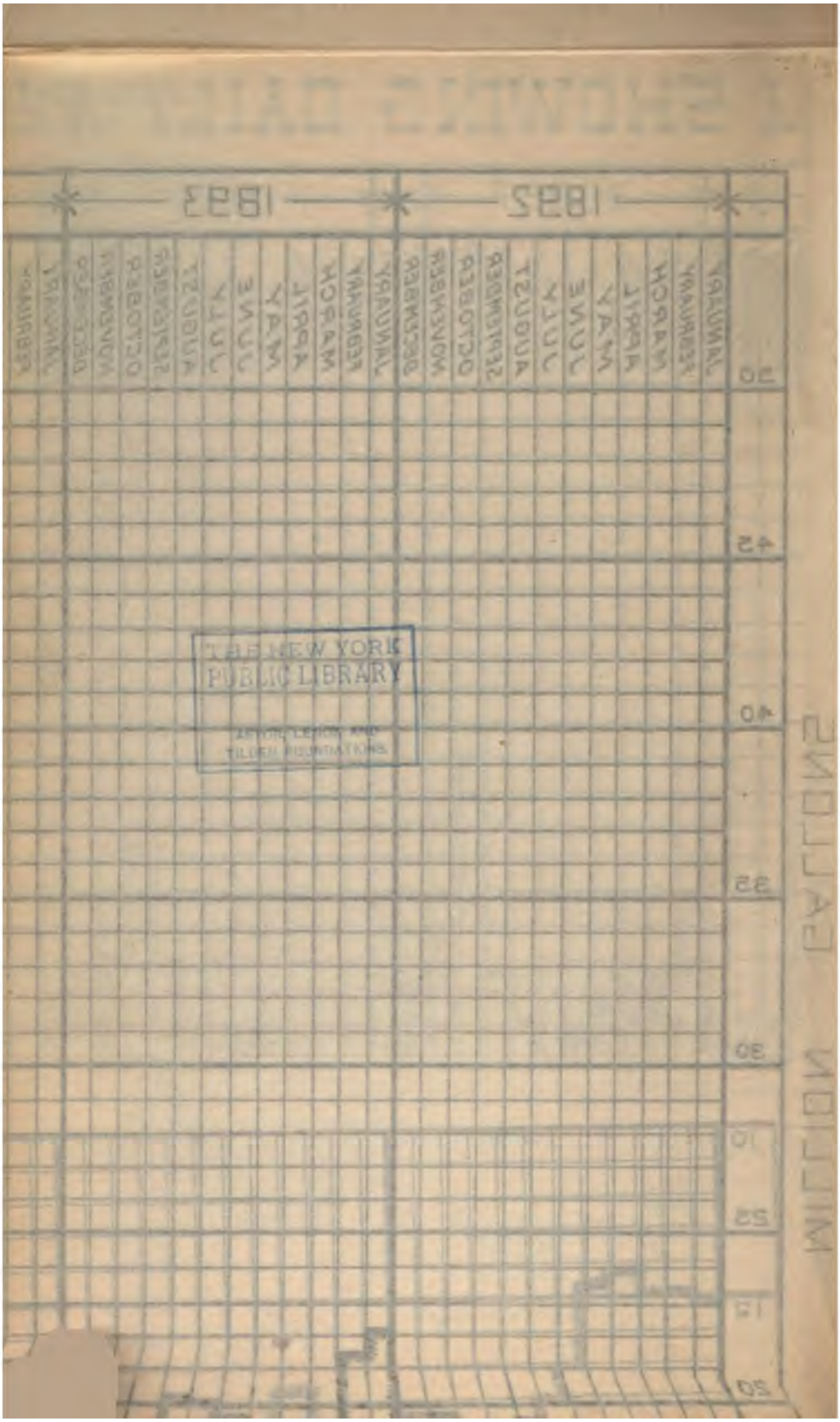

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CONSUMPTION.

The number of new taps made during the year was 2,694 (an increase of 1,077 over last year); of these 1 was of 8-inch diameter; 13 of 6-inch; 12 of 4-inch; 6 of 3-inch; 47 of 2-inch; 180 of 1-inch, and 2,434 of ⅝-inch diameter.

The number of taps at the first of January, 1907, in the city was 44,304.

The following table gives the delivery of water to the distributing reservoirs (average consumption for 1907):

CONSUMPTION STATEMENT FOR THE YEAR ENDED DECEMBER 31ST, 1907.

MONTH, 1907.	Total Consumption per Million Gallons.	Average Daily Consumption Million Gallons.	Mean Temperature.	Rainfall in Inches.
January	1,121.1	36.2	31.1	4.93
February	1,166.3	41.7	23.0	3.72
March	1,170.4	37.8	40.6	4.31
April	1,034.7	34.5	45.4	5.89
May	1,018.1	32.8	55.8	6.45
June	1,011.5	33.7	65.5	4.37
July	1,095.5	35.3	75.4	.95
August	1,122.5	36.2	71.5	3.32
September	1,087.3	36.2	67.4	10.17
October	1,121.0	36.2	51.2	6.07
November	1,056.3	35.2	43.4	5.01
December	1,054.0	34.0	36.4	4.88
Total	13,058.7			60.07

Average daily consumption equals 35,777,260 gallons.

Average daily consumption per water taker equals 872.

Approximate number of taps at the end of the year equals 44,304.

The accompanying folder gives the consumption since 1892, when the gravity plant was introduced. The average daily consumption per water taker was increased from 830 gallons in the year 1906 to 872 gallons per tap in 1907.

DISTRIBUTION.

The extensions to street mains in the city during the year 1907 was as follows:

855	lineal	feet	of 24	inch	diameter.	
3,417	"	"	" 16	"	"	
4,937	"	"	" 12	"	"	
1,920	"	"	" 10	"	"	
3,451	"	"	" 8	"	"	
40,992	"	"	" 6	"	"	
6,462	"	"	" 4	"	"	

62,034 lineal feet = 11 $\frac{3054}{5280}$ miles.

The approximate mileage of pipe of different diameters, deducting old pipes which were taken out and adding new pipes of large size in place of the old pipe taken out, is as follows:

43,200	lineal	feet	of 60	inch	diameter.	
141,197	"	"	" 48	"	"	
82,192	"	"	" 42	"	"	
40,718	"	"	" 36	"	"	
24,620	"	"	" 30	"	"	
49,660	"	"	" 24	"	"	
40,410	"	"	" 20	"	"	
23,746	"	"	" 16	"	"	
48,538	"	"	" 12	"	"	
66,674	"	"	" 10	"	"	
59,807	"	"	" 8	"	"	
1,070,702	"	"	" 6	"	"	
160,008	"	"	" 4	"	"	
485	"	"	" 3	"	"	

1,862,137 lineal feet = 352 $\frac{3577}{5280}$ miles.

This does not include any pipe connected with the High Pressure system.

Belleville Township laid 500 feet of 6-inch diameter.

The total length of pipe connected with the works is as follows:

In the city.....352 $\frac{3577}{5280}$ miles.

Belleville Township.....14 $\frac{616}{5280}$ miles.

Total .....366 $\frac{4193}{5280}$ miles.

The amount of work done in relaying pipe was as follows:

5,911	lineal	feet	of	8	inch	diameter.
7,605	"	"	"	6	"	"
86	"	"	"	4	"	"

Total 13,602 lineal feet = 2 $\frac{3042}{5280}$ miles.

The amount of work done in lowering pipe was as follows:

565	lineal	feet	of	10	inch	diameter.
7,605	"	"	"	6	"	"
86	"	"	"	4	"	"

Total 7,835 lineal feet = 1 $\frac{2555}{5280}$ miles.

During the year 202 new hydrants were set; of these 78 were substituted in place of old hydrants and 124 were added to the number already in place, making the total number of hydrants in the city 2,751.

The distribution system during the year has been extended and enlarged by the laying of approximately 11½ miles of pipe ranging in size from 4 to 24 inches in diameter.

The laying of a feeder in Vanderpool street and Avenue C, which was commenced during last year, has been continued this year by the laying of a 16-inch main in Wright street from the middle of the block between Avenue B and Avenue C to Avenue C, and in Avenue C from Wright to South streets, and in South street from Avenue C east. In this latter street the pipe was of 24-inch diameter. This feeder should be finished during this coming year by continuing this 24-inch line of pipe in South street to Jefferson street and through the latter street to Chestnut street. This feeder when all laid will complete a circulation between the 20-inch main in Broad and Vanderpool streets and the 20-inch main in Jefferson and Chestnut streets.

A 16-inch main and a 12-inch main respectively were laid in Frelinghuysen Avenue from Old Elizabeth Road to Evergreen Avenue, and a 12-inch main was laid in Evergreen Avenue from Frelinghuysen Avenue easterly under the Pennsylvania Railroad to the City Line.

These feeders in the southerly section of the city were laid in order to give the necessary supply for manufacturing purposes and also to furnish adequate fire protection to the rapidly developing industrial section of the city.

A State law passed in 1906 requires that all properties in streets intended to be paved should be provided with water pipes and water services prior to said pavement, and it was therefore not only necessary for this department to put in a larger number of distributing feeders and street main extensions, but also to put in nearly double the number of water services than in previous years.

In compliance with the suggestion of the National Board of Fire Underwriters, a resurvey for the location of valves on account of changed position of curb lines incident to repaving of streets, and also to inspect the condition of the valves and hydrants, has been made.

As stated previously, in other reports, dead ends throughout the city are being connected, and also old hydrants with 3 and 4-inch barrels are being replaced with new modern hydrants.

THE PITOMETER.

The importance of restricting waste of water has been recognized in many of the larger cities of the United States, namely, New York, Philadelphia, Boston, Chicago and others, including this city. To this end the Board of Street and Water Commissioners engaged the services of an expert, Mr. E. S. Cole, C. E., to lay out the distribution system in districts, resurvey the same and investigate, with the use of the Pitometer, whether any extensive waste of water existed. The easterly part of the city, east of Jefferson street and north of South street, has been partly completed, and according to the report received, no great waste of water was discovered. It would be advisable, however, to continue this investigation in a systematic manner under our own supervision.

ELECTROLYSIS.

During the last few years we have been put to a great deal of trouble and expense on account of electrolysis.

At the intersection of South Fourteenth Street and Central Avenue a section of about 84 feet of 6-inch cast iron pipe had to be taken out on account of being entirely easten away by the electrical current, and it was necessary to replace many services on this account. We also had a great deal of trouble in the neighborhood of Springfield Avenue and High Street, Market Street and Ferry Street, and South Market and

Bowery Streets, Hamburg Place and Avenue L, and practically throughout the entire city. It is imperative that we look into this matter at once and have an electrical survey made in order to find means and ways to abate this evil.

HIGH PRESSURE SYSTEM.

Owing to the paving of Beacon street, a 16-inch high pressure main was laid in Beacon street from South Orange to Springfield Avenues, and three high pressure hydrants were inserted on this block, one located on the east side and two on the west side of said street. It is the intention to continue this high pressure line in the future east and west on Springfield Avenue in order to provide that district, where so many high structures were erected during the last few years, with the necessary fire protection.

As mentioned in last year's report, steps should be taken to lay the high pressure line along the River front from Rector street north.

On account of not having sufficient accommodations for our horses and wagons at our City Stables in Eighth Avenue and Factory street, the Water Department has frequently been compelled to hire other stable accommodations, and also due to the enlargement of the territory of the city on account of the annexation of Vailsburg and Clinton Township, too much time is consumed in reaching the outskirts of the city in case of breaks, &c. It is therefore advisable to build a stable, with keeper's residence, storeroom, &c., on the city's property on the east side of South Eighth Street between Fourteenth and Fifteenth Avenues. Said property is also conveniently located for a pipe yard, &c., and the construction in the near future of such a building is recommended.

Respectfully submitted,

G. SANZENBACHER,

Engineer and Superintendent, Department of Water.

LIBRARY

BELLEVILLE RECEIVING RESERVOIR.
Capacity of reservoir 14,500,000 gallons. Elevation of flow line 165 feet.

DETAILED STATEMENTS

TO ACCOMPANY

Report of Engineer and Superintendent

DEPARTMENT OF WATER

STATEMENT OF PIPE LAID IN 1907.

Month, 1907.	LOCATION OF PIPE.	Length in Lineal Feet. 24"	20"	16"	12"	10"	8"	6"	4"	Stops.	Hydrants.
January	Doremus Ave. from Hamburg Pl. Road to Avenue R						2,768			5	1
"	Avenue R., south of Doremus Ave							654		1	
"	South 13th St. on east and west sides, from Clinton Ave. to Madison Ave.							72	1,759	4	2
"	Frelinghuysen Ave. from gateway at Weston Electric Co., southerly							300			
"	Lawrence St. from Commerce St. to South Canal St						195				
"	Dark Lane from Hayes St. westerly								199		
"	Dewey St. from Nye Ave. northerly						177			2	
February	Fourth St. from dead end southerly to 3d Ave							127		1	
"	Third Ave. from 4th St. to 5th St						274				
"	Shephard Ave. from dead end between Hunterdon St. and Bergen St. to dead end west of Bergen St							596		2	1
"	Mapes Ave. from Bergen St. westerly							160		1	1
"	Bergen St. from Shephard Ave. to Mapes Ave							247		1	1
"	Woodside Ave. from Montclair Ave. north							141		2	
March	Hazelwood Ave. from dead end south of Fortuna St. to Cliff St. (Vailsb'g)							228		1	1
"	Geneva St. between Cliff Hill and Hill Pl. (Vailsburgh)							304		1	
"	Mead St. from dead end to Lennox Ave. (Vailsburgh)							705		2	2
"	Lennox Ave. from Mead St. westerly (Vailsburgh)							388		1	
April	Austin St. from Murray St. to north side of Emmet St							512		2	1
"	Oraton St. across Grafton Ave							79		1	
"	Seymour Ave. between Eckert Ave. and Bock Ave							220		1	1
"	Nye Ave. across Fabyan Pl							90		2	
"	Fabyan Pl. from Buffington Ave. to Shaw Ave							1,117		4	4
"	Lorreto St. across Fabyan Pl. westerly							37		1	
"	Selvage St. across Fabyan Pl. westerly							37		1	
"	Shaw Ave. to City line							36			
"	Cypress St. across Fabyan Pl							48		1	
"	Voorhees St. across Fabyan Pl							49		1	
"	Ridgewood Ave. from Marie Pl. southerly								181	1	1
"	New York Ave. from Garrison St. easterly							135			1
May	Homestead Park to Hawthorne Ave							494		2	1
	Carried Forward						3,414	6,776	2,139	41	18

STATEMENT OF PIPE LAID IN 1907.—CONTINUED.

Month, 1907.	LOCATION OF PIPE.	Length in Lineal Feet.								Stops.	Hydrants.
		24"	20"	16"	12"	10"	8"	6"	4"		
	Brought forward						3,414	6,776	2,139	41	18
May	South 20th St. north of 19th Ave.							144			
"	Nineteenth Ave. south of South 20th St.							16			
"	Johnson Ave. from Hawthorne Ave. southerly							895		1	1
"	Marion Ave. from dead end between Sandford Ave. and Vail St. westerly (Vailsburgh)								719	2	2
"	Runyon St. from dead end west of Sherman Ave. to Elizabeth Ave.							288			
"	Plum Point Lane from dead end easterly to east side of Central R. R. tr'ks							2,158		1	1
"	Brill St. from Passaic Ave. to Morris Canal							136		1	1
"	Hawthorne Ave. from Johnson Ave. to Hillside Ave.							271		1	1
"	Hillside Ave. from Hawthorne Ave. to 100 feet north of Watson Ave.							876			1
"	Elizabeth Ave. from dead end to Prospect Ave.							1,127		2	2
June	Lyons Ave. from Dewey St. westerly							539		2	1
"	Wainwright St. from Shaw Ave. southerly							164		1	1
"	South 20th St. from dead end east of 16th Ave. to 17th Ave.							329		1	
"	Meeker Ave. across Bound Creek							160			
"	Bock Ave. from Seymour Ave. westerly							307		1	1
"	Lyons Ave. from Clinton Pl. easterly							295		1	1
"	Lockwood St. from dead end south of Lister Ave. southerly							108			
"	Silk St. from Bank St. to Academy St.								294	1	
"	Henry St. from Bank St. to Academy St.								342	1	
"	South 12th St. from 16th Ave. to dead end southerly							543			2
July	Peat St. across South 12th St.								38	1	
"	Fabyan Pl. from Shaw Ave. to Lyons Ave.							583		1	1
"	George St. from Magazine St. to Main St.							216			
"	Clover St. from Ferguson St. to Chambers St.							233		1	1
"	Clover St. from Van Buren St. to Polk St.							232			
"	South 12th St. from dead end south of Springfield Ave. to Woodlawn Ave.							328		1	1
"	Chadwick Ave. from Jeffery Pl. southerly							260			1
"	Jeffery Pl. from Bergen St. to Chadwick Ave.							281		1	
"	Avon Ave. from Badger Ave. westerly to Railroad					84					
"	Madison Ave. from Shanley Ave. to South 10th St.				245					1	
	Carried Forward				245	84	3,414	17,265	3,532	63	37

STATEMENT OF PIPE LAID IN 1907.—CONTINUED.

Month, 1907.	LOCATION OF PIPE.	Length in Lineal Feet. 24"	20"	16"	12"	10"	8"	6"	4"	Stops.	Hydrants.
	Brought forward	----	----	----	245	84	3,414	17,265	3,532	63	37
July	Oraton St. from Hinsdale Pl. to Chester Ave.	----	----	----	----	----	----	706	----	2	1
"	North 7th St. from south side of Delavan Ave. northerly	----	----	----	----	----	----	136	----	1	----
"	Woodside Ave. from Heller Parkway southerly	----	----	----	----	----	----	205	----	1	----
"	German St. from South 10th St. to South 11th St.	----	----	----	----	----	----	306	----	2	----
"	Avon Ave. from Shanley Ave. to South 10th St.	----	----	----	----	377	----	----	----	2	1
"	Madison Ave. across Farley Ave.	----	----	----	----	----	----	72	----	----	----
"	Madison Ave. across Treacy Ave.	----	----	----	----	----	----	98	----	2	----
"	Madison Ave. across Baldwin Ave.	----	----	----	----	----	----	72	----	----	----
"	South 10th St. across Avon Ave.	----	----	----	99	----	----	----	----	2	----
"	Shanley Ave. across Avon Ave.	----	----	----	----	----	----	61	----	1	----
August	Avon Ave. from dead end west of Badger Ave. to Jelliff Ave.	----	----	----	----	173	----	----	----	----	----
"	Rose St. from Badger Ave. to Bergen St.	----	----	----	----	----	----	920	----	2	----
"	Jelliff Ave. across Rose St.	----	----	----	----	----	----	86	----	2	1
"	Nichols Alley across Plane St.	----	----	----	----	----	----	----	31	1	----
"	Avon Ave. between South 10th St. and South 11th St.	----	----	----	----	276	----	----	----	----	----
"	Avon Ave. between South 13th St. and South 15th St.	----	----	----	----	461	----	----	----	2	----
"	Avon Ave. between South 18th St. and South 19th St.	----	----	----	----	277	----	----	----	1	----
"	Avon Ave. from dead end west of Montgomery Ave. to City Line	----	----	----	----	87	----	----	----	----	1
"	South 11th St. across Avon Ave.	----	----	----	----	----	----	37	----	1	----
"	South 12th St. across Avon Ave.	----	----	----	----	----	----	37	----	1	----
"	South 13th St. across Avon Ave.	----	----	----	----	----	----	37	----	1	----
"	South 16th St. across Avon Ave.	----	----	----	----	40	----	----	----	----	----
"	Bond St. from Hudson St. easterly	----	----	----	----	----	----	----	457	1	1
"	Hawthorne Ave. from Hillside Ave. to Belmont Ave.	----	----	----	----	----	----	----	220	----	----
"	Belmont Ave. from Hawthorne Ave. southerly	----	----	----	----	----	----	----	195	1	1
"	Runyon St. from Milford Ave. to Johnson Ave.	----	----	----	----	----	----	364	----	1	----
"	Runyon St. from Bergen St. to Chadwick Ave.	----	----	----	----	----	----	240	----	----	----
"	Bigelow St. across Chadwick Ave.	----	----	----	----	----	----	72	----	----	----
"	Rose St. from dead end north of Chadwick Ave. northerly	----	----	----	----	----	----	84	----	----	----
"	New St. from High St. to Summit St.	----	----	----	----	----	----	353	----	2	----
September	Clifton Ave. from Grafton Ave. northerly	----	----	----	----	145	----	----	----	1	----
	Carried Forward	----	----	----	344	1,920	3,414	21,151	4,435	93	43

STATEMENT OF PIPE LAID IN 1907.—CONTINUED.

Month. 1907.	LOCATION OF PIPE.	Length in Lineal Feet. 24"	20"	16"	12"	10"	8"	6"	4"	Stops	Re-laying
	Brought forward				344	1,030	5,414	23,134	4,485	99	49
September	Across Oliver St. at proposed street east of Tyler St.							92		4	
"	Hillside Ave. from dead end south of Bigelow St. to north side of West Newark Branch of P. R. R.							993		8	8
"	Runyon St. across Hillside Ave.							86		1	1
"	South 15th St. from 9th Ave. southerly							61		1	1
"	Ridge St. from Park Ave. northerly							90		1	1
"	Frelinghuysen Ave. from Weston Ave. southerly			919						2	2
"	Frelinghuysen Ave. from dead end of 16-inch main to Evergreen Ave.				2,792					2	2
"	Evergreen Ave. from Frelinghuysen Ave. easterly to east side of P. R. R.				1,158					1	1
"	Evergreen Ave. from Frelinghuysen Ave. westerly to Elizabeth Road							957		6	8
"	Hanford St. across Evergreen Ave. northerly							40		1	
"	Ross St. across Evergreen Ave. northerly							40		1	
"	Elizabeth Road from Frelinghuysen Ave. westerly							66		1	
"	Custer Ave. across Bergen St.							60		1	
"	Hawthorne Pl. across Bergen St.							57		1	
"	Willoughby St. from St. James Pl. to Bragaw Ave.							846		6	6
"	St. James Pl. from dead end west of Aldine St. to dead end west of Willoughby St.							361		1	1
"	Edwin Pl. from Willoughby St. to Dewey St.							101		1	1
"	Aldine St. from Lyons Ave. to Forrest Pl.							663		6	6
"	Evergreen Ave. from end of 12-inch main east of P. R. R. to City Line of Elizabeth							1,496		1	9
"	Renner Ave. across Bergen St.							40			
"	Frelinghuysen Ave. from Evergreen Ave. southerly							517		1	1
October	Murray St. between Avenue C. and Goble St.							407		6	1
"	Delavan Ave. between Summer Ave. and Woodside Ave.							620		1	
"	Bedford Ave. between Frelinghuysen Ave. and Elizabeth Road							503		6	1
"	Lyons Ave. east of Fabyan Pl.							97			
"	Parker St. east side from 2nd Ave. northerly								630	1	1
"	Parker St. west side from 2nd Ave. northerly								632	1	1
"	Highland Ave. east side from 2nd Ave. northerly								630	1	1
	Carried Forward			919	4,350	1,030	5,414	30,770	5,760	132	70

STATEMENT OF PIPE LAID IN 1907.—CONTINUED.

Month, 1907.	LOCATION OF PIPE.	Length in Lineal Feet. 24"	20"	16"	12"	10"	8"	6"	4"	Stops.	Hydrants.
	Brought forward	----	----	912	4,256	1,920	3,414	29,776	5,766	132	70
October	Highland Ave. west side from 2nd Ave. northerly	----	----	----	----	----	----	----	329	1	----
"	Lake St. from 2nd. Ave. northerly (east side)	----	----	----	----	----	----	----	367	1	1
"	North 5th St. from dead end north to Abington Ave.	----	----	----	----	----	----	220	----	1	1
"	Heller Parkway from Mt. Prospect Ave. to Clifton Ave.	----	----	----	----	----	----	332	----	1	----
"	Montclair Ave. across Woodside Ave.	----	----	----	----	----	----	72	----	----	----
"	Grafton Ave. across Woodside Ave.	----	----	----	----	----	----	24	----	----	----
"	Verona Ave. from Lincoln Ave. easterly	----	----	----	----	----	----	181	----	1	----
November	North 10th St. from Chester Ave. northerly	----	----	----	----	----	----	350	----	1	1
"	North 10th St. from Chester Ave. southerly	----	----	----	----	----	----	354	----	1	1
"	North 11th St. from dead end north of Chester Ave. northerly	----	----	----	----	----	----	48	----	----	----
"	East Kinney St. from Van Buren St. to Tyler St.	----	----	----	----	----	----	409	----	1	----
"	East Kinney St. from dead end to Elm Road	----	----	----	----	----	----	202	----	1	----
"	Elm Road from East Kinney St. to Ann St.	----	----	----	----	----	----	105	----	1	----
"	South Belmont Ave. from Hawthorne Ave. southerly	----	----	----	----	----	----	703	----	1	1
"	Cliff St. from Sandford Ave. to Richelieu Terrace (Vailsburgh)	----	----	----	----	----	----	523	----	1	----
December	Third Ave. from North 5th St. westerly	----	----	----	----	----	37	----	----	1	----
"	Fourth Ave. from North 5th St. westerly	----	----	----	----	----	----	37	----	1	----
"	Marion Ave. across Verona Ave.	----	----	----	----	----	----	62	----	2	----
"	Lentz Ave. from Horatio St. to Plum Point Lane	----	----	----	----		----	719	----	2	2
"	Horatio St. across Lentz Ave.	----	----	----	66		----	----	----	----	----
"	Wright St. from 215 feet east of Avenue B. to Avenue C.	----	----	520	----		----	----	----	1	----
"	Avenue C. from Wright St. to Parkhurst St.	----	----	1,340	----		----	----	----	----	----
"	Parkhurst St. from Avenue C. to Dawson St.	----	----	75	----		----	----	----	----	----
"	Dawson St. from Parkhurst St. to South St.	12	----	570	----		----	----	----	1	----
"	South St. from Dawson St. to 200 feet south of Pacific St.	843	----	----	----		----	----	----	----	----
"	Wright St. across Avenue C.	----	----	----	----		----	50	----	2	----
"	Woodside Ave. from dead end between Elwood Ave. and Delavan Ave. southerly	----	----	----	----		----	156	----	----	----
"	South 10th St. from Avon Ave. and Madison Ave.	----	----	----	615		----	----	----	----	1
"	Warwick St. from Van Buren St. to Tyler St.	----	----	----	----		----	486	----	3	----
"	Delavan Ave. east of Seabury Pl.	----	----	----	----		----	292	----	1	1
	Carried Forward	855	----	3,417	4,937	1,920	3,451	35,161	6,462	158	79

STATEMENT OF PIPE LAID IN 1907.—CONTINUED.

Month, 1907.	LOCATION OF PIPE.	Length in Lineal Feet.								Stops.	Hydrants.
		24"	20"	16"	12"	10"	8"	6"	4"		
	Brought forward	855	----	3,417	4,937	1,920	3,451	35,161	6,462	158	79
December	Vernon Ave. from dead end east of Clinton Pl. easterly	----	----	----	----	----	----	108	----	----	----
"	North 8th St. from Chester Ave. southerly	----	----	----	----	----	----	193	----	1	----
"	North 8th St. from Berkley Ave. northerly	----	----	----	----	----	----	97	----	1	----
"	New York Ave. across Houston St.	----	----	----	----	----	----	42	----	----	----
"	Hanford St. from Evergreen Ave. northerly	----	----	----	----	----	----	240	----	----	----
"	Ross St. from Evergreen Ave. northerly	----	----	----	----	----	----	144	----	----	----
"	Miller St. from Avenue C. westerly	----	----	----	----	----	----	30	----	----	----
"	Prospect Ave. from Elizabeth Ave. to 370 feet westerly of Clinton Pl.	----	----	----	----	----	----	3,511	----	8	5
"	Clinton Pl. from Prospect Ave. to Lyons Ave.	----	----	----	----	----	----	1,375	----	3	2
"	Hawthorne Ave. from Badger Ave. easterly	----	----	----	----	----	----	85	----	1	----
	Totals	855	----	3,417	4,937	1,920	3,451	40,992	6,462	172	86

During the year 62,034 lineal feet have been laid in the City, of which

855 lineal feet of 24 inch diameter
3,417 " " " 16 " "
4,937 " " " 12 " "
1,920 " " " 10 " "
3,451 " " " 8 " "
40,992 " " " 6 " "
6,462 " " " 4 " "

} 62,034 feet.

STATEMENT OF PIPE RELAID IN 1907.

Month, 1907.	LOCATION OF PIPE.	Length in Lineal Feet. 8"	6"	4"	Stops.	Hydrants.
February	Pearl St. from Washington St. easterly	------	178	------	1	----
April	Liberty St. from Greene St. to Elm St.	------	451	------	1	----
"	Austin St. from Thomas St. to Murray St.	------	746	------	2	----
"	Parkhurst St. from Austin St. to Tichenor St.	------	97	------	2	----
"	Grafton Ave. from Washington Ave. to Riverside Ave.	1,042	------	------	4	1
"	Riverside Ave. across Grafton Ave.	------	------	86	----	----
"	Fabyan Pl. from Clinton Ave. to Hawthorne Ave.	------	1,143	------	4	----
"	Beverly St. across Fabyan Pl. easterly	------	27	------	----	----
May	Spring St. from Clay St. to Cross St.	771	------	------	3	----
"	Cross St. from Spring St. to Ogden St.	295	------	------	2	1
"	Clay St. from Spring St. to Broad St.	262	------	------	2	----
"	Mulberry Pl. from Mulberry St. to N. J. R. R. Ave.	------	457	------	1	----
June	Central Ave. from 50 feet east of S. 14th St. to 50 feet east of S. 15th St.	------	240	------	----	----
"	Nassau St. from Nesbitt St. to Sheffield St.	------	738	------	3	2
July	Clover St. from Merchant St. to Ferguson St.	------	233	------	1	----
"	Ferguson St. across Clover St.	79	------	------	2	1
"	Garden St. from N. J. R. R. Ave. to McWhorter St.	------	777	------	1	1
"	Beacon St. from South Orange Ave. to Springfield Ave.	------	978	------	3	----
October	Union St. from Hamilton St. to Market St.	974	------	------	3	----
"	Ferguson St. from Ferry St. to Passaic Ave.	1,708	------	------	5	1
"	Hayes St. from 15th Ave. to southerly side of South Orange Ave.	------	1,235	------	5	1
November	Freeman St. from Bowery St. to Passaic Ave.	780	------	------	3	----
December	Pearl St. from Halsey St. westerly	------	208	------	1	----
"	Hayes St. connecting 6" main with 20" main on South Orange Ave.	------	27	------	1	----
"	Paterson St. across Wall St.	------	70	------	1	----
	Totals	5,911	7,605	86	51	8

During the year 13,602 lineal feet of pipe have been relaid in the City, of which

5,911 lineal feet of 8 inch diameter
7,605 " " " 6 " "
86 " " " 4 " " } 13,602 feet.

STATEMENT OF PIPE LOWERED IN 1907.

Month.	LOCATION OF PIPE.	Length in Lineal Feet. 10"	6"	4"	Stops.	Hydrants.
May	Magnolia St. from Fairview Ave. to 18th Ave.		840		1	1
	Hill St. from Passaic Ave. southerly		150			
	Vanderpool St. from Pennsylvania Ave. to Elizabeth Ave.		1,270			
July	Clifton Ave. north of Abington Ave.	500				
	Clifton Ave. south of Ballantine Parkway	565				2
August	Rose St. from Livingston St. to Badger Ave.		510			
	New St. from Hurl St. to Lock St.		280			
	New St. from Wilsey St. to Hudson St.		550			
September	Jelliff Ave. at intersection of Watson Ave.		100			
	North 4th St. from Orange St. to Sussex Ave.		690			
	North 4th St. from Central Ave. northerly		300			1
December	North 5th St. from Bloomfield Ave. southerly		2,015			2
	Sunset Ave. (Vailsburgh)			235		
	Totals	565	7,045	235	1	6

During the year 7,845 lineal feet of pipe have been lowered in the City, of which

565 lineal feet of 10 inch diameter
7,045 " " " 6 " "
235 " " " 4 " " } 7,845 feet.

PIPES LAID, RELAID AND LOWERED—YEAR ENDED DECEMBER 31, 1907.

	Length in Lineal Feet.							Totals.	Stops.	Hydrants.
	24"	16"	12"	10"	8"	6"	4"			
Pipe Laid (extensions)	855	3,417	4,937	1,920	3,451	40,992	6,402	62,034	172	86
Pipe Relaid (substitution of large for small pipes and replacing old horizontal cast pipes)	----	----	----	----	5,911	7,605	86	13,602	51	8
Pipe Lowered	----	----	----	565	----	7,045	225	7,835	1	6
Miscellaneous (new valves, valves on hydrants, in substitution for broken valves and replaced hydrants)	----	----	----	----	----	----	----	----	215	78
Total	855	3,417	4,937	2,485	9,362	55,642	6,713	83,471	439	178

Total pipe laid, relaid and lowered during the year equals 83,471 lineal feet, equals $15\frac{4271}{5280}$ miles.

Total mileage of pipe connected with the works at the end of the year, $352\frac{3577}{5280}$ miles.

STATEMENT OF SERVICES FOR YEAR ENDED DECEMBER 31, 1907.

Hydrant Services. Month.	No. of New Services.	No. of Services Removed.	No. of Taps only.	No. of Taps and Meters.	No. of New Water Takers.	No. of Feet of Pipe.	Charges.
January	[illegible]	[illegible]			[illegible]	[illegible]	[illegible]
February	[illegible]				[illegible]	[illegible]	[illegible]
March	[illegible]	[illegible]			[illegible]	[illegible]	[illegible]
April	[illegible]	[illegible]			[illegible]	[illegible]	[illegible]
May	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	[illegible]
June	[illegible]	[illegible]			[illegible]	[illegible]	[illegible]
July	[illegible]	[illegible]			[illegible]	[illegible]	[illegible]
August	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	[illegible]
September	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
October	[illegible]	[illegible]		[illegible]	[illegible]	[illegible]	[illegible]
November	[illegible]	[illegible]			[illegible]	[illegible]	[illegible]
December	[illegible]	[illegible]			[illegible]	[illegible]	[illegible]
Total	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

STATEMENT OF SERVICES FOR YEAR ENDED DECEMBER 31, 1907.

Hydrant Services. Month.	No. of New Services.	No. of Services Removed.	No. of Taps only.	No. of Taps and Meters.	No. of New Water Takers.	No. of Feet of Pipe.	Charges.
January	[illegible]				[illegible]	[illegible]	[illegible]
February	[illegible]				[illegible]	[illegible]	[illegible]
March	[illegible]				[illegible]	[illegible]	[illegible]
April	[illegible]				[illegible]	[illegible]	[illegible]
May	[illegible]				[illegible]	[illegible]	[illegible]
June	[illegible]				[illegible]	[illegible]	[illegible]
July	[illegible]				[illegible]	[illegible]	[illegible]
August	[illegible]				[illegible]	[illegible]	[illegible]
September	[illegible]				[illegible]	[illegible]	[illegible]
October	[illegible]				[illegible]	[illegible]	[illegible]
November	[illegible]				[illegible]	[illegible]	[illegible]
December	[illegible]				[illegible]	[illegible]	[illegible]
Total	[illegible]				[illegible]	[illegible]	[illegible]

RECAPITULATION, 1907.

Size.	No. of New Services.	No. of Services Renewed.	No. of Taps	No. of Stops and Boxes.	No. of New Water Takers.	No. of Feet of Pipe.	Charges.
⅝ Inch	2,434	65		9	892	51,347.0	$34,793.00
1 Inch	180	------		-----	139	3,521.0	3,600.00
Total	2,614	65		9	1,031	54,868.0	$38,393.00

SPECIAL SERVICE CONNECTIONS

FROM JAN. 1, 1907, TO DEC. 31, 1907.

MONTH.	2"	3"	4"	6"	8"	Total.
January	2	------	2	1	------	5
February	------	------	1	1	------	2
March	3	------	------	------	1	4
April	7	2	2	1	------	12
May	7	1	3	2	------	13
June	4	------	2	2	------	8
July	6	------	------	2	------	8
August	4	------	------	------	------	4
September	2	------	1	3	------	6
October	3	2	1	------	------	6
November	5	1	------	1	------	7
December	4	1	------	------	------	5
Total	47	7	12	13	1	80

METERS SET BY CONSUMERS 1907.

MONTH, 1907.	Trident.							Lambert.							Crown.			Nash.				Bee.			Worthington.	Total.
	⅝"	1"	1½"	2"	3"	4"	6"	⅝"	¾"	1"	1½"	2"	3"	6"	⅝"	¾"	1"	⅝"	¾"	1"	2"	⅝"	1"	3"	⅝"	
January	64	1		1			1			7													1			75
February	60	2	1	4		2		8		8		2														87
March	44		1	1	2			7		5	1										1					62
April	82	2		1	1			15		8	1	2	1	1			1						1			116
May	69	3		2				74	1	7	1	4			1			1						1		164
June	79	2		2		1		3		5	1															93
July	40		1		1			73		5		2								1			1			124
August	45	1	2	1			1	73		7		1	1									1				133
September	38	5	1	2			1	44		9		1	1		1				1							104
October	33	2		1	1			53		6		1				1									1	99
November	25		1					76		15		1			1											119
December	51	4		1				36		3																95
Total	630	22	7	16	5	3	3	462	1	85	4	14	3	1	3	1	1	1	1	1	1	1	3	1	1	1,271

Number of meters in use January 1, 1907 18,410
Total number of meters set during 1907 1,271

Total number of meters in use January 1, 1908 19,681

HYDRANT STATEMENT

For the Year Ended December 31, 1907

LOW SERVICE.

Month	No.	Location	Dia.	Hyd.	Stops
Jan.	1	Doremus Ave., north side, 537 ft. east of Hamburg Pl.	6"	1	1
March	2	High St., east side, south of Warren St.	6"	1	1
April	3	N. E. Cor. Austin and Emmet Sts.	6"	1	1
	4	N. W. Cor. Grafton and Riverside Aves.	6"	1	1
	5	New York Ave., north side, 125 ft. east of Garrison St.	4"	1	1
May	6	S. W. Cor. Cross and Ogden Sts.	6"	1	1
	7	Plum Point Lane	6"	1	1
	8	Brill St., east side, at the Morris Canal	6"	1	1
	9	N. E. Cor. Stanton St. and Elizabeth Ave.	6"	1	1
June	10	Providence St., east side, between Passaic Ave. and Bowery St.	6"	1	1
July	11	N. W. Cor. Clover and Chambers Sts.	6"	1	1
	12	N. W. Cor. Clover and Ferguson Sts.	6"	1	1
	13	North side of Garden St., between N. J. R. R. Ave. and McWhorter St.	6"	1	1
	14	Oraton St., west side, between Hinsdale Pl. and Chester Ave.	4"	1	1
	15	Hamburg Pl., south side, between Merchant and Lafayette Sts.	6"	1	1
Aug.	16	N. E. Cor. Branford St. and Elizabeth Ave.	6"	1	1
Sept.	17	Oliver St., north side, between Tyler St. and Elm Road	6"	1	1
	18	N. W. Cor. Lockwood and Ferry Sts.	6"	1	1
	19	S. W. Cor. Elizabeth Road and Frelinghuysen Ave.	6"	1	1
	20	Frelinghuysen Ave., west side, between Bedford Ave. and Elizabeth Road	6"	1	1
	21	N. W. Cor. Frelinghuysen and Bedford Aves.	6"	1	1
	22	Frelinghuysen Ave., west side, between Bedford and Evergreen Aves.	6"	1	1
	23	N. W. Cor. Frelinghuysen and Evergreen Aves.	6"	1	1

Month	No.	Location	Dia.	Revs.	Stops
	24	N. W. Cor. Hanford St. and Evergreen Ave.	6"	1	1
	25	N. W. Cor. Ross St. and Evergreen Ave.	6"	1	1
	26	N. E. Cor. Evergreen Ave. and Elizabeth Road	6"	1	1
	27	Evergreen Ave., north side, west of Pennsylvania Railroad	6"	1	1
	28	Evergreen Ave., 500 ft. south of Pennsylvania Railroad	6"	1	1
	29	Evergreen Ave., at city line	6"	1	1
	30	N. W. Cor. Frelinghuysen Ave. and Mitchell Pl.	6"	1	1
Oct.	31	S. E. Cor. Murray and Goble Sts.	6"	1	1
	32	N. E. Cor. Bedford Ave. and Elizabeth Rd.	6"	1	1
	33	New York Ave., south side, between Pacific and Jefferson Sts.	6"	1	1
	34	Ferguson St., west side, between Market St. and Passaic Ave.	6"	1	1
Dec.	35	N. W. Cor. Lentz Ave. and Plum Point Lane	6"	1	1
	36	Lentz Ave. west side between Horatio St. and Plum Point Lane	4"	1	1
	[illegible]	N. W. Cor. Delaware Ave. and Erie Pl.	6"	1	1
	[illegible]	S. W. Cor. Wall and Ferry Sts.	4"	1	1
	[illegible]	S. E. Cor. Wall and Ferry Sts.	4"	1	1
	[illegible]	N. W. Cor. Miller St. and Avenue C	6"	1	1

HIGH SERVICE

Month	No.	Location	Dia.	Revs.	Stops
Jan.	[illegible]	S. W. Cor. Speight St. and Madison Ave.	6"	1	1
	[illegible]	South [illegible] St. west side between Clinton and Madison Aves.	4"	1	1
Feb.	[illegible]	[illegible] St. [illegible] side and west of Bergen St.	4"	1	1
	[illegible]	S. W. Cor. Bergen St. and Stegman Ave.	4"	1	1
	[illegible]	N. W. Cor. Nelson Ave. and Bergen St.	4"	1	1
Mar.	[illegible]	[illegible]	4"	1	1
	[illegible]	[illegible]	6"	1	1
	[illegible]	[illegible]	6"	1	1
	[illegible]	[illegible]	4"	1	1

Month	No.	Location	Dia.	Hyd.	Stops
	50	N. E. Cor. Mead St. and Ocean Ave. (Vailsburgh)	4"	1	1
April	51	S. W. Cor. Seymour and Bock Aves	4"	1	1
	52	N. E. Cor. Fabyan Pl. and Cypress Ave	6"	1	1
	53	N. E. Cor. Fabyan Pl. and Vorhees St	4"	1	1
	54	N. W. Cor. Fabyan Pl. and Buffington Ave.	4"	1	1
	55	Fabyan Pl., west side, between Lorreto and Selvage Sts	4"	1	1
	56	Ridgewood Ave., west side, 152 ft. south of Marie Pl	4"	1	1
May	57	Homestead Park (south side)	6"	1	1
	58	S. W. Cor. Magnolia St. and Springfield Ave.	6"	1	1
	59	Johnson Ave., west side, between Hawthorne and Watson Aves	4"	1	1
	60	N. E. Cor. Marion Ave. and Vail St. (Vailsburgh)	4"	1	1
	61	Marion Ave., at dead end west of Vail St. (Vailsburgh)	4"	1	1
	62	S. W. Cor. Hawthorne and Hillside Aves.	4"	1	1
	63	West side of Hillside Ave., 480 ft. south of Hawthorne Ave	4"	1	1
June	64	West side of Elizabeth Ave., between Weequahic and Prospect Aves	6"	1	1
	65	N. E. Cor. Elizabeth and Prospect Aves	6"	1	1
	66	N. E. Cor. Lyons Ave. and Leslie St	4"	1	1
	67	Wainwright St., east side, 130 ft south of Shaw Ave.	4"	1	1
	68	Bock Ave., north side, at dead end west of Seymour Ave.	6"	1	1
	69	Wilsey St., west side, between Warren and New Sts	6"	1	1
	70	S. E. Cor. New and Nuttman Sts	6"	1	1
	71	Lyons Ave., north side, opp. Clinton Pl.	6"	1	1
	72	Nassau St., north side, between Sheffield and Nesbitt Sts	4"	1	1
	73	S. 12th St., west side, between 15th and 16th Aves.	4"	1	1
	74	S. 12th St., west side, between 16th and 17th Aves.	6"	1	1
	75	N. W. Cor. S. 12th St. and 18th Ave	4"	1	1

Month	No.	Location	Dia.	Hyd.	Sign
	76	S. 12th St., west side, between 17th and 18th Aves.	4"	1	1
July	77	N. W. Cor. Fabyan Pl. and Lyons Ave.	4"	1	1
	78	N. W. Cor. S. 12th St. and Woodlawn Ave.	4"	1	1
	79	Beacon St., west side, 200 ft. south of South Orange Ave.	6"	1	1
	80	N. E. Cor. Beacon St. and Springfield Ave.	6"	1	1
	81	Beacon St., east side, 300 ft. north of Springfield Ave.	6"	1	1
	82	Beacon St., west side, opp. Trefz Brewery	6"	1	1
	83	Chadwick Ave., west side, 250 ft. south of Jeffrey Pl.	4"	1	1
	84	Clifton Ave., west side, between Ballantine Parkway and Delavan Ave.	4"	1	1
	85	N. W. Cor. Clifton Ave. and Ballantine Parkway	4"	1	1
	86	S. W. Cor. S. 10th St. and Avon Ave.	6"	1	1
	87	Tracy Ave., west side, between Avon and Madison Aves.	6"	1	1
	88	Farley Ave., west side, between Avon and Madison Aves.	6"	1	1
Aug.	89	N. E. Cor. Rose St. and Jelliff Ave.	6"	1	1
	90	N. W. Cor. S. 16th St. and Avon Ave.	6"	1	1
	91	Avon Ave., north side, at city line	6"	1	1
	92	N. W. Cor. Voorhees and Leslie Sts.	4"	1	1
	93	S. W. Cor. Belmont and Hawthorne Aves.	4"	1	1
	94	N. W. Cor. Chadwick and Hawthorne Aves.	6"	1	1
Sept.	95	N. W. Cor. Hillside Ave. and Runyon St.	6"	1	1
	96	Hillside Ave., west side, 80 ft. north of Peddie St.	6"	1	1
	97	Hillside Ave., west side, between Runyon and Peddie Sts.	6"	1	1
	98	S. 15th St., west side, at dead end south of 9th Ave.	4"	1	1
	99	Ridge St., west side, between Park and 4th Ave.	4"	1	1
	100	N. W. Cor. Willoughby St. and St. James Pl.	4"	1	1
	101	S. W. Cor. Willoughby St. and Bragaw Ave.	4"	1	1

Month	No.	Location	Dia.	Hyd.	Stops
	102	St. James Pl., north side, at dead end west of Willoughby St.	4"	1	1
	103	N. E. Cor. Edwin Pl. and Dewey St.	4"	1	1
	104	S. W. Cor. Aldine St. and Forest Pl.	4"	1	1
	105	Aldine St., west side, between Lyons Ave. and Forest Pl.	4"	1	1
Oct.	106	Hayes St., west side, opp. Dark Lane.	4"	1	1
	107	Parker St., west side, 600 ft. north of 2nd Ave.	4"	1	1
	108	Parker St., east side, 300 ft. north of 2nd Ave.	4"	1	1
	109	Highland Ave., east side, 300 ft. north of 2nd Ave.	4"	1	1
	110	Lake St., east side, 300 ft. north of 2nd Ave.	4"	1	1
	111	S. W. Cor. N. 5th St. and Abington Ave.	4"	1	1
Nov.	112	S. W. Cor. N. 10th St. and Chester Ave.	4"	1	1
	113	N. 10th St., west side, between Chester and Delavan Aves.	4"	1	1
	114	Belmont Ave., west side, between Hawthorne Ave. and Marie Pl.	4"	1	1
Dec.	115	N. 5th St., west side, between Bloomfield and 2nd Aves.	4"	1	1
	116	N. 5th St., west side, between 3rd and 4th Aves.	4"	1	1
	117	S. 10th St., west side, between Avon and Madison Aves.	6"	1	1
	118	Prospect Ave., north side, 500 ft. west of Elizabeth Ave.	4"	1	1
	119	Prospect Ave., south side, 1,000 ft. west of Elizabeth Ave.	4"	1	1
	120	Prospect Ave., north side, 1,880 ft. west of Elizabeth Ave.	4"	1	1
	121	Prospect Ave., north side, opp. Maple Ave.	4"	1	1
	122	Prospect Ave., north side, 380 ft. west of Clinton Pl.	4"	1	1
	123	N. W. Cor. Clinton Pl. and Prospect Ave.	4"	1	1
	124	Clinton Pl., west side, between Prospect and Lyons Aves.	4"	1	1

HYDRANTS REPLACED DURING THE YEAR 1907.

LOW SERVICE.

Month	No.	Location	Dia.	Hyd.	Stop
Jan.	1	N. W. Cor. Washington St. and Central Ave.	4"	1	.
Feb.	2	N. E. Cor. N. J. R. R. Ave. and Green St.	4"	1	.
Mar.	3	N. W. Cor. Orchard and Thomas Sts.	4"	1	.
April	4	S. W. Cor. Liberty and Hamilton Sts.	4"	1	.
	5	N. E. Cor. Austin and Parkhurst Sts.	6"	1	1
	6	N. E. Cor. Austin and Murray Sts.	6"	1	1
	7	N. E. Cor. Grafton Ave. and Oraton St.	6"	1	1
May	8	N. E. Cor. Passaic Ave. and Brill St.	4"	1	1
	9	N. W. Cor. Spring St. and 8th Ave.	6"	1	1
	10	S. W. Cor. Spring and Grant Sts.	6"	1	1
	11	S. W. Cor. Spring and Cross Sts.	6"	1	1
	12	N. E. Cor. Vanderpool St. and Elizabeth Ave.	6"	1	1
	13	N. W. Cor. Vanderpool St. and Sherman Ave.	4"	1	1
July	14	S. W. Cor. Columbia and Hamilton Sts.	4"	1	.
	15	S. W. Cor. Nichols and Adams Sts.	4"	1	.
	16	N. W. Cor. George and St. Charles Sts.	6"	1	1
	17	Clover St. north side, opp. Merchant St.	6"	1	1
	18	N. W. Cor. Garden and McWhorter Sts.	6"	1	1
	19	N. E. Cor. Broad and Green Sts.	4"	1	.
	20	N. W. Cor. Webster St. and 7th Ave.	4"	1	1
	21	S. W. Cor. Walnut and Jefferson Sts.	4"	1	.
Sept.	22	N. W. Cor. Tyler and Oliver Sts.	4"	1	1
	23	S. E. Cor. New York Ave. and McWhorter St.	4"	1	1
Oct.	24	N. E. Cor. Poinier St. and Elizabeth Ave.	4"	1	1
	25	Housten St., west side, between Hamburg Pl. and New York Ave.	4"	1	1
	26	S. E. Cor. Union and Market Sts.	6"	1	1
	27	N. W. Cor. Union and Ferry Sts.	6"	1	1
	28	S. W. Cor. South St. and N. J. R. R. Ave.	4"	1	1
	29	S. E. Cor. Bank and Washington Sts.	4"	1	.
	30	New York Ave., south side, between Jefferson and Adams Sts.	4"	1	1
	31	S. E. Cor. Ferguson St. and Passaic Ave.	6"	1	1

Month	No.	Location	Dia.	Hyd.	Stops
	32	Ferguson St., west side, between Clover and Market Sts	6″	1	1
	33	N. E. Cor. Ferguson and Market Sts	6″	1	1
	34	N. W. Cor. Ferguson and Ferry Sts	6″	1	1
Nov.	35	S. W. Cor. Freeman St. and Passaic Ave.	6″	1	1
	36	Freeman St., west side, between Bowery St. and Passaic Ave	6″	1	1
	37	Housten St., west side, between New York Ave. and Elm Road	4″	1	1
	38	S. E. Cor. Lang St. and Hamburg Pl	6″	1	.
Dec.	39	N. W. Cor. Durand and Cherry Sts	4″	1	1

HIGH SERVICE.

Month	No.	Location	Dia	Hyd.	Stops
Jan.	40	N. E. Cor. 7th Ave. and N. 14th St	4″	1	.
	41	S. W. Cor. S. 12th St. and 15th Ave	4″	1	.
	42	N. E. Cor. Spruce and Barclay Sts	4″	1	.
Feb.	43	5th St., west side, between 2nd and 3rd Aves.	6″	1	1
	44	4th St., west side, between 2nd and 3rd Aves.	6″	1	1
	45	N. W. Cor. 4th St. and 3rd Ave	6″	1	1
	46	S. 11th St., west side, between Central and 9th Aves.	4″	1	.
Mar.	47	S. W. Cor. S. 12th St. and Avon Ave	6″	1	.
	48	S. W. Cor. W. Kinney and Vine Sts	4″	1	1
	49	Governor St., north side, 175 ft. west of Vine St.	4″	1	1
	50	N. W. Cor. Vine and Governor Sts	4″	1	1
April	51	S. 10th St., west side, opp. Goris St	4″	1	.
May	52	Homestead Park (north side)	6″	1	1
	53	S. W. Cor. Magnolia and Bergen Sts	4″	1	.
June	54	N. W. Cor. Warren and Wilsey Sts	4″	1	1
	55	N. E. Cor. S. 18th St. and 19th Ave	4″	1	.
	56	N. W. Cor. Nassau and Sheffield Sts	4″	1	1
	57	N. W. Cor. Warren St. and Central Ave	4″	1	.
	58	S. 10th St., west side, between Central and 11th Aves	4″	1	.
July	59	N. W. Cor. Parker St. and Park Ave	4″	1	.
	60	N. E. Cor. Abington and Clifton Aves	4″	1	1
	61	S. 10th St., west side, south of German St.	4″	1	.

Month	No.	Location	Dia.	Hyd.	Stops
	62	S. 10th St., west side, opp. Blum St.....	4"	1	.
Aug.	63	N. W. Cor. Springfield Ave. and Broome St.	4"	1	1
	64	N. W. Cor. Kent and Skinkle Sts.....	4"	1	1
	65	N. W. Cor. New St. and Morris Ave....	4"	1	1
	66	N. E. Cor. New St. and 1st Ave.....	4"	1	1
Sept.	67	N. W. Cor. S. 6th St. and South Orange Ave.	4"	1	.
	68	N. W. Cor. S. 6th St. and 14th Ave.....	4"	1	.
	69	N. E. Cor. James and Nesbitt Sts.....	4"	1	1
Oct.	70	N. W. Cor. 15th Ave. and S. 8th St....	4"	1	.
	71	S. W. Cor. Hayes St. and 14th Ave.....	6"	1	1
	72	S. W. Cor. Bloomfield Ave. and Parker St.	4"	1	1
	73	S. W. Cor. Somerset St. and Waverly Ave.	4"	1	1
	74	N. W. Cor. S. 7th St. and 15th Ave....	4"	1	.
	75	N. W. Cor. Roseville and Sussex Aves...	4"	1	.
	76	4th St., west side, between Orange St. and Sussex Ave.	4"	1	.
Dec.	77	S. W. Cor. Hunterdon St. and 16th Ave..	4"	1	.
	78	S. W. Cor. Hunterdon St. and Springfield Ave.	4"	1	.

RECAPITULATION.

New hydrants set on Low Service.....	40
New hydrants set on High Service.....	84
New hydrants replacing old on Low Service.....	39
New hydrants replacing old on High Service.....	39
	202

The total number of hydrants connected with the works at the end of the year was—

In the city on Low Service.....	1,174
In the city on High Service.....	1,577
Total in the city.....	2,751
Township of Belleville.....	2
Total	2,753

Summary of Statistics of the Newark, N. J., Water Works for the Year Ending December 31, 1907.

In form recommended by the New England Water Works Association.

GENERAL STATISTICS.

Population by census, 1905.....283,000
Date of Construction 1889-1891
By whom owned .....City of Newark
Source of Supply .....Pequannock River
Mode of Supply.....Gravity

STATISTICS OF CONSUMPTION OF WATER.

Estimated total population at date.....305,000
Estimated population on lines of pipe.....305,000
Estimated population supplied.....305,000
Total consumption for the year.....13,058.7 mill. gallons
Passed through meters..... 5,022.8 mill. gallons
Percentage of consumption metered.....38.5%
Average daily consumption.....35.8 mill. gallons
Gallons per day to each inhabitant.....117 gallons
Gallons per day to each consumer.....117 gallons
Gallons per day to each tap in use.....87.2 gallons
Cost of supplying water, per million gallons figured on total maintenance.....$17.27
Total cost of supplying water, per million gallons figured on total maintenance plus sinking fund, and interest on bonds.....$69.38

STATISTICS REGARDING DISTRIBUTION SYSTEM.

MAINS.

Kind of pipe.....cast iron and steel
Sizes, from .....4 inch to 60 inch
Extended .....62,034 feet during the year
Discontinued .....0 feet during the year
Total now in use.....352 $\frac{3577}{5280}$ miles
Cost of repairs per mile.....$2.40
Length of pipe less than 4 inches diameter.....800 feet
Number of hydrants added during the year (public and private) 202
Number of hydrants (public and private) now in use..2751
Number of stop gates added during year.....394
Number of stop gates now in use.....4709
Number of stop gates smaller than 4 inch.....4
Range of pressure on distributing mains.....25 to 75 lbs.
Range of pressure on high pressure system....90 to 160 lbs.

SERVICE.

Kind of pipe.....lead and cast iron
Sizes ..... ⅝ inch to 6 inch
Extended .....56,468 feet.
Total now in use.....168 miles
Number of service taps added during year.....2,694
Number now in use 44,304
Average length of service.....20 feet
Average cost of service for the year.....$13.82
Number of meters added.....1,271
Number now in use.....19,681
Percentages of services metered.....44.5%
Percentage of receipts from metered water.....69%

FINANCIAL STATISTICS.

RECEIPTS.

Balance brought forward from receipts, Jan. 1, 1907		$90,949.52
From water rates—		
Fixture rates	$298,893.11	
Meter rates	664,195.98	
Total from consumers		$963,089.09
For hydrants	free	
" fountains	free	
" street watering	free	
" public buildings	free	
" miscellaneous uses	$17,143.47	
Total from municipal departments	5,000.00	
From bond issue	.....	
" other sources	64,736.15	$86,879.62
Total		$1,140,918.23

EXPENDITURES.

Operation (management and repairs		$206,710.60
Interest on bonds	$468,655.00	
Payment of bonds	.....	
Sinking Fund	211,850.00	680,505.00
Water Works Construction—		
Extension of mains and feeders	$130,506.65	
" " services	37,228.24	
" " meters	22,941.45	
Total construction		$ 190,676.34
Unclassified expenses—		
Repair meters, handling material, etc.		11,428.58
Balance		51,597.71
Total		$1,140,918.23

Net cost of works to date (less old plant charged off) and less 2% annual depreciation on distribution	$11,140,176.13
Bonded debt at date (including refunded debt)	11,957,000.00
Value of Sinking Fund at date	3,367,864.47
Average rate of interest, per cent	3.933%

FINANCIAL STATEMENT

ACCOUNTING DIVISION

DEPARTMENT OF WATER

Year Ending December 31, 1907

Newark, N. J., March 1, 1908.

WILLIAM E. GREATHEAD, ESQ.

Clerk of the Board of Street & Water Commissioners:

DEAR SIR—I herewith submit financial statements and trial balance of the Department of Water, for the year ended December 31, 1907.

Respectfully yours,

H. D. NORTHROP,

Cashier.

RECEIPTS FOR 1907

Balance, January 1st, 1907			$90,949.52
Advance Water Rent Collection		$298,893.11	
Hose Water Rent Collection		1,820.50	
Fractional Water Rent Collection		951.66	
Sprinklers Water Rent Collection		2,192.00	
Building Water Rent Collection		5,256.48	
Special Water Rent Collection		1,713.28	
Arrears Water Rent Collection		4,207.55	
Measured Water Rent Collection		664,195.98	
Service Collection Account		25,894.77	
Sales on Service		61.62	
Penalties and Fines		173.15	
Rents, Real Estate		900.00	
Sundry Personal Accounts		37,157.66	
Transfer from Fund for Con. Stor. Res., Temporary		5,000.00	
Refund, Pay Roll		19.20	
Service Liens	$525.00		
Interest on same	0.75		
		547.75	
			1,049,968.71
Total			$1,140,918.23

DISBURSEMENTS FOR 1907

General Bond Interest	$468,655.00
Monthly Pay Roll	61,939.60
Weekly Pay Roll	163,551.23
Sinking Fund	211,850.00
Horse Shoeing	596.08
Water Gauges	90.00
Addressograph Supplies	75.86
General Repairs	1,013.72
Stationery and Printing	3,581.71
General Supplies	2,459.53
Service Stock Plumbers' Supplies	1,680.49
Galvanized Iron Pipe	551.33
Hay, Feed, Oats, etc	2,371.92
Masons' Work and Material	1,280.58
Coal and Wood	988.92
Lumber	1,454.91
Horse, Wagon and Truck Hire	1,687.87
Inspection Pipe	429.77
Wagon Repairs	1,610.61
Yarn, Jute and Oakum	424.60
Lead Pipe	11,525.66
Kerosene Oil and Gasolene	758.41
Paint and Supplies	856.08
Repair Harness	290.79
Stable Supplies	173.15
New Maps	105.90
Freight	453.46
Valves	3,655.19
Boarding Horses	1,301.25
Petty Expenses, Engineering Dept	2,486.76
Petty Expenses, Accounting Div	1,142.96
Meter Repair Parts	2,452.37
New Meters	20,011.22
Blacksmithing Repair Tools	1,040.00
Solder	1,245.60
Rent	146.84
Gum and Rubber Boots	502.25
Stop and Curb Boxes	4,776.22
Electricity, Light and Power	133.42

Cast Iron Pipe	$62,348.18
Tax	2,067.92
Repaving Street Cuts	1,257.02
General Expenses	33.56
Photo Supplies	60.20
Advertising	43.30
Corporation and Curb Stops	6,103.63
Eng. Supplies	414.03
Maps Repaired	43.50
Electric Repairs	60.47
Telephone Service	199.45
Coke	4.50
Gas	208.60
New Fence at Belleville	54.85
Appraising Property	8.00
New Horses	780.00
Bulbs and Plants	352.65
Brass Goods	18.00
New Wagon	185.00
Extra Heavy Pipe	31.20
Electric Supplies and Time	100.14
New Hydrants	3,937.00
Hydrant Repair Parts	1,446.78
Veterinary	263.25
Water Keys	53.00
Pig Lead	6,286.17
Castings	4,505.12
New Tapping Machines	300.00
Board, Lodging and Meals	68.45
Rubber Hose	264.25
Pressure Expert	3,411.25
Water Sites and Sleeves	3,423.67
New Machine Furnace	90.00
Pipe Jumpers	258.80
Retouch	40.40
Stamping Tables	87.52
Shade Trees	277.45
United States Flag	7.00
Dues	10.50
New Office Furniture	38.00
[illegible] Water Shed [illegible] Pipe Line	110.00
[illegible] Water Shed	250.86

Fire Extinguishers	$15.75
Clay or Sewer Pipe	9.18
New Drinking Fountains	200.00
Blue Flag Stones	62.50
Ice	15.51
Wire Fence	65.39
New Tools	416.52
Royalty on Tapping Machine	1,286.44
Insurance	40.51
Extra Labor	129.27
Tanks and Pump	259.00
Special Castings for Conduits	1,728.61
Assessment for Improvement of Roads in Verona	494.40
Repair Roads at Cedar Grove	371.63
Special Iron Work for Vault (5th and Bloomfield Aves.)	100.00
New Walk and Excavation at S. 8th St	162.58
Extra Service Revising and Opening New Assessment Books	149.00
Laying 12 in. Pipe under Penn. R. R. at Waverly	216.95
Refund to Fund Con. Storage Res	5,000.00
	$1,089,587.17
Less Items transferred to Fund for Con. Storage Res. in August	266.65
	$1,089,320.52

COMPARATIVE STATEMENT OF DISBURSEMENTS

1906–1907.	1906.	1907.
Street Main Extension	$42,164.89	$91,458.51
Feeders	45,763.73	38,334.37
Reconstruction	12,969.84	23,363.04
Maintenance, General, and Repairs	13,427.58	24,585.86
Repair of Tools	726.00	1,252.20
General Expense	6,356.54	8,017.45
Handling Material	631.39	1,157.56
Engineer and Sup't Expense	12,151.26	16,387.69
Accounting Division Expense	33,028.07	37,721.78
Meter Division	16,389.07	18,264.36
Distributing Reservoirs	6,232.92	6,829.53

Meter Repairs	$5,620.16	$9,016.53
Repair, Department Meters	1,117.50	3,309.55
Repair, Belleville Reservoir	105.57	202.35
Repair, S. Orange Ave. Res	143.90	281.40
Repair, Services	6,955.13	9,058.10
Repair, Hydrants and Setting	14,509.24	17,488.28
Inspection	13,954.00	19,683.65
Stable Expense	6,847.17	8,400.16
Service Acct.	23,428.92	37,228.24
Pumping Stations	2,388.00	2,468.30
Maintenance New Water Supply	18,174.61	15,303.40
Miscellaneous Labor	6,096.97	3,383.35
Stable Stock and Fixtures	1,210.90	216.40
New Meters	15,839.44	21,420.65
New Hydrants	4,129.50	4,581.02
Insurance	694.42	347.21
General Supplies	1,801.05	2,392.69
New Tools	40.00	674.03
Repair, Street Mains	4,514.17	1,889.81
Sinking Fund	203,900.00	211,850.00
Interest on Water Bonds	460,255.00	468,655.00
Loss and Gain, Refunding, etc	2,873.02	1,841.86
High Pressure Water System	501.68	393.96
Maintenance New Storage Res	5,129.75	3,546.49
Maintenance, Conduits	14,516.99	9,643.23
Maintenance, Reservoirs, Grounds, etc	6,232.92	6,829.53

ACCOUNTS RECEIVABLE

December 31st, 1907.

Advance Water Rent Account	$15,676.13
Fractional Water Rent Account	602.11
Measured Water Rent Account	46,561.04
Special Water Account	770.44
Building Water Account	120.89
Arrears Water Rent Account	3,989.63
Service Collection Account	921.00
*Sundry Personal Accounts	71,482.31
Total	$140,123.55

* Due from City for repair of hydrants, new hydrants and drinking fountains, $5,391.03.

TRIAL BALANCE

December 31, 1907.

Cash		$51,597.71	
Construction		2,695,300.70	
General Bond Account		.....	$11,957,000.00
Stable Stock and Fixtures		7,187.50	
Petty Cash		306.07	
Office Furniture, Fixtures and Fittings		10,056.05	
Water Meter Account		2,058.50	
Department Meters		18,244.00	
Hydrant Account		1,498.50	
Insurance		347.21	
Street Mains, Stock and Material		39,660.87	
Service Stock		4,429.29	
Real Estate, General		104,768.09	
Tool Account		11,420.09	
Meter Repair Stock		1,558.98	
High Pressure Water System—			
Inventory	$16,550.91		
Cost	103,266.39		
		119,817.30	
Surplus and Deficiency		546,829.12	
New Water Supply		6,219,568.67	
Service Collection Acct		921.00	
Advance Water Rent Collection Acct		15,676.13	
Fractional Water Rent Collection		602.11	
Building Collection Acct		120.89	
Special Water Collection Acct		770.44	
Measured Water Collection Acct		46,561.04	
Arrears Water Rent Collection Acct		3,989.63	
Sundry Personal Collection Acct		71,482.31	
Cedar Grove Res., Stock & Fixtures		1,100.25	
New Storage Res., Material Acct		1,127.55	
New Storage Res., Construction Acct., Balance of Bond Issue	78,273.49		
Cost	1,901,726.51	1,980,000.00	
		$11,957,000.00	$11,957,000.00

ASSETS AND LIABILITIES

Cash Balance, December 31, 1907	$51,597.71	
Property	11,140,176.13	
Accounts Receivable	140,123.55	
New Storage Reservoir Constr'n Acct.	78,273.49	
General Water Bonds		$11,957,000.00
Surplus and Deficiency	546,829.12	
	$11,957,000.00	$11,957,000.00

SCHEDULE OF PROPERTIES, 1907

DEPARTMENT OF WATER.

Belleville Pumping House	$22,562.50	
" Boiler House Extension	1,805.00	
" Engineer & Fireman's Dwel'g	9,025.00	
" New Chimney	4,963.75	
" Pumping Engine No. 1	4,512.50	
" " " No. 2	4,512.50	
" " " No. 3	13,537.50	
" " " No. 4	18,050.00	
" New Boilers	14,113.58	
		$93,082.33
River Wall, Dock and Basin	22,562.50	22,562.50
Driven Wells	20,103.19	
Drilled Wells	32,646.13	
Caisson Wells	2,214.56	
		54,963.88
Belleville Keeper's House	1,353.75	
High Service Engine House	13,527.50	
High Service Engine House	2,256.25	
New Boiler, Clifton Avenue	1,805.00	
High Service Pumping Engine	4,512.50	
High Service Pumping Engine	4,512.50	
Belleville Receiving Reservoir	125,737.64	
Belleville Reservoir Appurtenances	7,670.32	
High Service Reservoir, S. O. Avenue	89,022.91	
Low Service Reservoir	114,463.71	364,871.08
Street Mains, General, 1906	1,431,154.74	
Street Mains, General, 1907	91,458.51	
		1,522,613.25

Pumping Main No. 1		$70,951.47
Pumping Main No. 2		36,203.57
Supply Main No. 1		116,329.21
Supply Main No. 2		62,588.84
Supply Main No. 2, Section A		38,329.50
Distributing Main No. 2		48,765.41
Extra High Service Main		25,838.24
Twelfth Ward Feeder		5,482.53
Ingraham Place Feeder		1,086.62
Bridge Street Feeder		1,720.65
Regular High Service Feeder No. 2		16,900.88
Regular High Service Feeder No. 2 Extension		9,350.03
Forest Hill Feeder		5,282.82
Roseville Feeder		17,838.41
Seventh Avenue Feeder		4,001.39
South Street Feeder		1,975.73
Fourteenth Avenue Feeder		4,132.17
Ferry Street Feeder		5,808.48
South Ninth Street Feeder		635.81
Fourteenth Street Feeder		1,322.12
Waverly Avenue Feeder		733.11
Hawthorne Avenue Feeder		641.67
Verona Avenue Feeder		1,468.27
Special High Service Feeder		917.01
Feeders, 1906	$97,102.35	
Feeders, 1907	38,334.37	
		135,436.72
Distributing Main No. 2 Extension		3,674.40
Distributing Main No. 1		45.88
High Service Main No. 1		44.60
High Service Main No. 2		17,527.78
Low Service Supply Main No. 3		1,046.79
New Storage Reservoir Material Acct.		1,127.55
		$2,695,300.70

REAL ESTATE

No. 1.	No. 129 Halsey Street.....	$26,964.15	
No. 5.	Nominal	100.00	
No. 6.	Seventh and Summer Aves..	4,000.00	
No. 12.	Ground and Building New City Stables	26,958.47	
No. 13.	Right of Way and Alley, Millbrook Sewer	75.00	
No. 14.	Drift Street at Factory Street Nominal	20.00	
No. 16.	Clifton Avenue Pump House.	6,000.00	
No. 18.	Low Service Res., Nominal..	1.00	
No. 52.	Hecker Street, Nominal.....	100.00	
No. 53.	S. O. Ave. Res., Nominal....	1.00	
No. 54.	Cor. 14th Ave. and 9th St....	4,975.00	
No. 55.	Cor. 14th Ave. and 8th St....	7,500.00	
No. 56.	Belleville Pump House, and Six Houses	11,883.64	
No. 57.	Opposite Pump House.....	1,693.92	
No. 58.	Belleville Reservoir, Nominal	1.00	
No. 59.	Part of Bellev. Res. Property	532.50	
No. 60.	Back of Bellev. Res. Property	11,113.86	
No. 61.	Portion Right of Way, Supply Main No. 2.....	450.00	
No. 62.	Portion Right of Way, Supply Main No. 2.....	339.00	
No. 63.	Portion Right of Way, Supply Main No. 2.....	389.55	
Land for Drilled Wells, Belleville, N. J.		1,670.00	
			$104,768.09
Total			$2,800,068.79

INVENTORY

December 31, 1907.

Street Mains, Stock and Material.....	$39,660.87	
Service Stock and Material.....	4,429.29	
Hydrants on Hand.....	1,498.50	
Water Meters on Hand.....	2,058.50	
Meter Repair Stock.....	1,558.98	
Tools	11,420.09	
Stable Stock and Fixtures.....	7,187.50	
Office Furniture, Fixtures and Fittings	10,056.05	
Cedar Grove Reservoir.....	1,100.25	
Petty Cash	306.07	
Water Meters owned and set by Department	18,244.00	
Insurance	347.21	
High Pressure Water System Stock...	16,550.91	
		$114,418.22
New Water Supply.....	6,194,519.41	
New Storage Reservoir.....	1,869,596.51	
High Pressure Water System.....	103,269.98	
		8,167,385.90
		$8,271,804.12

REAL ESTATE

No. 1.	No. 129 Halsey Street.....	$26,964.15
No. 5.	Nominal	100.00
No. 6.	Seventh and Summer Aves..	4,000.00
No. 12.	Ground and Building New City Stables	26,958.47
No. 13.	Right of Way and Alley, Millbrook Sewer	75.00
No. 14.	Drift Street at Factory Street Nominal	20.00
No. 16.	Clifton Avenue Pump House.	6,000.00
No. 18.	Low Service Res., Nominal..	1.00
No. 52.	Hecker Street, Nominal.....	100.00
No. 53.	S. O. Ave. Res., Nominal....	1.00
No. 54.	Cor. 14th Ave. and 9th St....	4,975.00
No. 55.	Cor. 14th Ave. and 8th St....	7,500.00
No. 56.	Belleville Pump House, and Six Houses	11,883.64
No. 57.	Opposite Pump House.....	1,693.92
No. 58.	Belleville Reservoir, Nominal	1.00
No. 59.	Part of Bellev. Res. Property	532.50
No. 60.	Back of Bellev. Res. Property	11,113.86
No. 61.	Portion Right of Way, Supply Main No. 2.....	450.00
No. 62.	Portion Right of Way, Supply Main No. 2.....	339.00
No. 63.	Portion Right of Way, Supply Main No. 2.....	389.55
Land for Drilled Wells, Belleville, N. J.		1,670.00
	Total	$

MONTHLY REPORT OF PRECIPITATION (Rain and Melted Snow)

As observed at Newark Public High School, by Prof. William Wiener, with U. S. Gov. Rain Gauge.

JULY, 1907. Elevation of gauge above sea level, 180 feet. TABLE NO. 7.

Day of Month.	Beginning.	Ending.	Max. in 5 min. in Inches.	Beginning.	Max. in 10 min. in Inches.	Beginning.	Max. in 1 hour in Inches.	Beginning.	Am't of Rain or Melted Snow in Inches.	Depth of Snow in Inches.	Gen'l Direction of Wind.	Max. Vel. Wind Miles per hour.	Average Temperature.	Barometer.	Humidity.	Remarks.
1											S W	15	76.5	29.87	84	
2									*		S W	15	74.5	29.82	92	
3											N W	15	70	30.05	86	
4											S W	12	71.5	30.08	80	
5											S W	15	72.5	29.97	88	
6											S W	15	74.7	29.88	91	
7											S E	8	75.7	29.85	91	
8	8:30 p m	8:45 p m				8:30 p m	.01		.01		S W	20	78	29.89	88	Thunder storm.
9											N W	20	77	29.77	87	
10											S W	20	77.2	29.82	86	
11	1:45 a m	5:50 a m							.03		N E	12	71	29.87	96	Thunder storm in afternoon.
"	3:40 p m	4:30 p m				3:40 p m	.25		.25							
12											N W	30	72.7	29.78	92	
13											N W	15	73	29.95	90	
14											N W	10	72.2	30.01	90	
15											S E	12	69.2	30.06	91	
16											S E	10	75	30.04	92	
17											S W	20	79.7	29.97	93	
18	4:30 p m	4:45 p m							*		S W	15	78	29.97	92	
19											W	12	80	29.98	89	
20	8:00 a m	12:40 p m							.38		S	15	74.5	29.86	97	Thunder storm.
"	9:45 p m	10:20 p m	.05	10:05 p m	.12	10:08 p m	.16	10:30 a m	.15							
21											W	30	75	29.92	87	
22	2:30 p m								*		S	12	76.2	29.90	93	
23											N W	30	76.5	29.82	88	
24	8:30 p m								*		S E	15	73.5	29.91	92	Eclipse of moon.
25											W	12	80.7	29.82	85	Halo about moon.
26	3:30 p m								*		S W	30	73.5	29.69	91	
27											N W	30	71.7	29.78	88	
28											W	20	72	29.88	90	
29	12:00 a m	3:30 p m							.13		S W	12	67.2	29.83	97	
30											W	12	75	29.70	89	
31											S W	12	75	29.85	83	
	Total								.95				Av. 77.1	Av. 29.98	Av. 89.9	

* Too small to be measured.
Depth of 10 inches snow averages 1 inch rain.

TABLE NO. 6.

MONTHLY REPORT OF PRECIPITATION (Rain and Melted Snow)

As observed at Newark Public High School, by Prof. William Wissler, with U. S. Gov. Rain Gauge.

Elevation of gauge above sea level, 180 feet.

AUGUST, 1907.

Day of Month.	Beginning.	Ending.	Max. in 5 min. in Inches.	Beginning.	Max. in 10 min. in Inches.	Beginning.	Max. in 1 hour in Inches.	Beginning.	Am't of Rain or Melted Snow in Inches.	Depth of Snow in Inches.	Gen'l Direction of Wind.	Max. Vel. Wind per Mile.	Average Temperature.	Barometer.	Humidity.	Remarks.
1	11:45 a m	1:30 p m							.02		S W	12	72.7	29.80	90	
2											S E	12	74.7	29.83	90	
3	11:00 p m	12:00 p m							.01		W	15	73.5	29.94	89	
4	12:00 p m	7:00 a m							.35		W	15	68.7	30.06	90	
5	9:30 p m	11:00 p m							.02		S E	12	70	30.12	92	
6	3:00 a m	7:00 a m							.09		S W	15	75.2	30.02	90	
7											S E	12	76	30.01	82	
8											N W	20	80.2	30.00	77	
9	1:00 p m	1:30 p m					.04	1:00 p m	.04		N E	15	69	30.11	94	
10											S E	8	72	30.06	89	
11											S E	10	75.5	30.01	87	
12											S	20	80	29.87	78	
13	11:30 a m	12:30 p m									N W	20	73.5	29.92	88	
14											N W	30	69	30.13	86	
15											W	12	70	30.25	83	
16											S E	15	68.7	30.20	89	
17	2:00 a m	3:30 a m							.16		S E	12	72.7	30.07	94	
18											N E	20	74.5	30.07	88	
19											E	12	69.2	30.26	83	
20											S E	15	73.7	30.11	88	
21											N E	20	74	29.99	92	
22											N E	15	71	30.13	83	
23	9:30 p m	12:00 p m							.05		S E	15	67.7	30.17	94	
24	9:00 p m	10:15 p m	.20	9:47 p m	.48	9:40 p m	1.50	9:00 p m	1.50							Heavy storm and spectacular lightning.
"	12:00 p m	8:30 a m							1.02		E	15	64.7	29.87	98	
25											W	12	70.7	29.77	85	
26											N W	20	67.5	29.90	87	
27	8:45 p m	9:15 p m					.04	8:45 p m	.04		S W	15	65.2	29.96	93	
28											N W	15	66.7	29.89	91	
29											N W	20	68	29.97	85	
30											W	12	66	29.98	86	
31											N W	20	67.7	30.00	87	
Total									3.22				Av. 73.5	Av. 30.01	Av. 88	

* Too small to be measured.
Depth of 10 inches snow averages 1 inch rain.

MONTHLY REPORT OF PRECIPITATION (Rain and Melted Snow)

As observed at Newark Public High School, by Prof. William Wiener, with U. S. Gov. Rain Gauge.

SEPTEMBER, 1907. Elevation of gauge above sea level, 180 feet. TABLE NO. 9.

Day of Month.	Beginning.	Ending.	Max. in 5 min. in Inches.	Beginning.	Max. in 10 min. in Inches.	Beginning.	Max. in 1 hour in Inches.	Beginning.	Am't of Rain or Melted Snow in Inches.	Depth of Snow in Inches.	Gen'l Direction of Wind.	Max. Vel. Wind Miles per hour.	Average Temperature.	Barometer.	Humidity.	Remarks.
1											N W	4	68.7	30.03	81	
2	6:30 a m	12:30 p m			.03	12:10 p m	.09	11:20 a m	.26		S W	15	70.2	29.84	94	Labor Day.
3	7:30 p m	8:30 p m							*		S W	15	74	29.84	95	
4	7:35 a m	11:30 a m	.10	7:50 a m	.18	7:50 a m	.23	7:45 a m	.34		S E	20	73.5	29.95	96	Thunder storm.
5	2:45 a m	6:45 a m							.02		S	15	73	29.95	92	Thunder storm.
"	10:45 a m	11:30 a m	.15	10:50 a m	.25	10:50 a m	.83	10:45 a m	.83							
6											W	12	69.2	29.90	85	
7											S W	10	70	29.94	87	
8	6:30 a m	11:40 a m							.04		N E	10	67.7	29.93	95	
9									*		N E	5	67.5	30.11	93	
10											S E	6	69.5	30.16	95	
11	1:10 a m	1:55 a m							.15							
"	12:20 p m	12:45 p m							*		S	12	71	29.99	92	
"	3:30 p m	6:00 p m	.13	3:34 p m	.26	3:34 p m	.27	3:50 p m	.42							
12											S W	12	66.5	30.09	85	
13											W	10	70	30.27	83	
14											S E	5	70.5	30.33	85	
15											S W	5	72	30.38	85	
16											S W	3	74.7	30.28	82	Halo about moon.
17											S W	3	75.5	30.14	90	
18	12:05 p m	7:35 p m							.62		S W	12	59.2	30.30	95	
19											N E	3	57.5	30.25	94	
20	4:00 a m	6:00 a m							.03		N E	3	67.5	30.06	91	
21	5:00 p m	5:30 p m							.30		S W	20	74.7	29.97	92	Thunder storm.
"	5:50 p m	6:50 p m	.17	5:00 p m	.27	5:00 p m	.3	5:00 p m	.03							
22	2:50 p m	12:00 p m	.12	3:00 p m	.16	2:55 p m	.36	2:50 p m	.86		S W	5	67	29.95	93	
23	9:00 a m	7:15 p m	.10	3:08 p m	.16	3:03 p m	.53	3:00 p m	2.04		S W	12	64.7	29.77	97	
"	12:00 p m	9:00 a m														
24	4:45 p m	5:15 p m	.15	4:43 p m	.22	4:43 p m	.25	4:40 p m	.25		S W	18	69	29.76	88	Thunder storm.
"	5:50 p m	7:50 p m							.30							
25											N W	8	55.7	29.67	85	
26											N W	4	51.5	30.22	78	
27	5:15 a m	5:25 a m							*		S W	4	57.2	30.20	89	
28	3:15 p m	12:00 p m	.07	5:03 p m	.10	5:00 p m	.28	4:15 p m	1.21		N	10	64	30.08	99	
29	12:00 p m	11:00 a m	.07	3:10 a m	.13	3:07 a m	.46	3:45 a m	2.45		N W	12	51.2	29.84	92	
30											N	7	57.7	30.05	85	
	Total---								10.07				Av. 68.1	Av. 30.04	Av. 89.7	

* Too small to be measured.
Depth of 10 inches snow averages 1 inch rain.

MONTHLY REPORT OF PRECIPITATION (Rain and Melted Snow)

As observed at Newark Public High School, by Prof. William Wiener, with U. S. Gov. Rain Gauge.

AUGUST, 1907. Elevation of gauge above sea level, 180 feet. TABLE NO. 8.

Day of Month.	Beginning.	Ending.	Max. in 5 min. in Inches.	Beginning.	Max. in 10 min. in Inches.	Beginning.	Max. in 1 hour in Inches.	Beginning.	Am't of Rain or Melted Snow in Inches.	Depth of Snow in Inches.	Gen'l Direction of Wind.	Max. Vel. Wind Miles per hour.	Average Temperature.	Barometer.	Humidity.	Remarks.
1	11:45 a m	1:30 p m							.02		S W	12	72.7	29.80	90	
2											S E	12	74.7	29.83	90	
3	11:00 p m	12:00 p m							.01		W	15	73.5	29.94	89	
4	12:00 p m	7:00 a m							.35		W	15	68.7	30.00	90	
5	9:30 p m	11:00 p m							.02		S E	12	70	30.12	92	
6	3:00 a m	7:00 a m							.09		S W	15	75.2	30.02	90	
7											S E	12	76	30.01	83	
8											N W	20	80.2	30.00	77	
9	1:00 p m	1:30 p m					.04	1:00 p m	.04		N E	15	69	30.11	94	
10											S E	S	72	30.06	89	
11											S E	10	75.5	30.01	87	
12											S	20	80	29.87	78	
13	11:30 a m	12:30 p m									N W	20	73.5	29.92	88	
14											N W	30	69	30.13	86	
15											W	12	70	30.25	83	
16											S E	15	68.7	30.20	89	
17	2:00 a m	3:30 a m							.16		S E	12	72.7	30.07	94	
18											N E	20	74.5	30.07	88	
19											E	12	69.2	30.26	83	
20											S E	15	73.7	30.11	88	
21											N E	20	74	29.99	92	
22											N E	15	71	30.13	83	
23	9:30 p m	12:00 p m							.05		S E	15	67.7	30.17	94	
24	9:00 p m	10:15 p m	.20	9:47 p m	.48	9:40 p m	1.50	9:00 p m	1.50							Heavy storm and spectacular lightning.
"	12:00 p m	8:30 a m							1.02		E	15	64.7	29.87	98	
25											W	12	70.7	29.77	85	
26											N W	20	67.5	29.90	87	
27	8:45 p m	9:15 p m					.04	8:45 p m	.04		S W	15	65.2	29.96	93	
28											N W	15	66.7	29.89	91	
29											N W	20	68	29.97	85	
30											W	12	66	29.98	86	
31											N W	20	67.7	30.00	87	
Total									3.22				Av. 73.5	Av. 30.01	Av. 88	

* Too small to be measured.
Depth of 10 inches snow averages 1 inch rain.

MONTHLY REPORT OF PRECIPITATION (Rain and Melted Snow)

As observed at Newark Public High School, by Prof. William Wiener, with U. S. Gov. Rain Gauge.

SEPTEMBER, 1907. Elevation of gauge above sea level, 180 feet. TABLE NO. 9.

Day of Month.	Beginning.	Ending.	Max. in 5 min. in Inches.	Beginning.	Max. in 10 min. in Inches.	Beginning.	Max. in 1 hour in Inches.	Beginning.	Am't of Rain or Melted Snow in Inches.	Depth of Snow in Inches.	Gen'l Direction of Wind.	Max. Vel. Wind Miles per hour.	Average Temperature.	Barometer.	Humidity.	Remarks.
1											N W	4	68.7	30.03	81	
2	6:30 a m	12:30 p m			.03	12:10 p m	.09	11:20 a m	.26		S W	15	70.2	29.84	94	Labor Day.
3	7:30 p m	8:30 p m							*		S W	15	74	29.84	95	
4	7:35 a m	11:30 a m	.10	7:50 a m	.18	7:50 a m	.23	7:45 a m	.34		S E	20	73.5	29.95	96	Thunder storm.
5	2:45 a m	6:45 a m							.02		S	15	73	29.95	92	Thunder storm.
"	10:45 a m	11:30 a m	.15	10:50 a m	.25	10:50 a m	.83	10:45 a m	.83							
6											W	12	69.2	29.90	85	
7											S W	10	70	29.94	87	
8	6:30 a m	11:40 a m							.04		N E	10	67.7	29.93	95	
9									*		N E	5	67.5	30.11	93	
10											S E	6	69.5	30.16	95	
11	1:10 a m	1:55 a m							.15							
"	12:20 p m	12:45 p m							*		S	12	71	29.99	92	
"	3:30 p m	6:00 p m	.13	3:34 p m	.26	3:34 p m	.27	3:50 p m	.42							
12											S W	12	66.5	30.00	85	
13											W	10	70	30.27	83	
14											S E	5	70.5	30.33	85	
15											S W	5	72	30.38	85	
16											S W	3	74.7	30.28	82	Halo about moon.
17											S W	3	75.5	30.14	90	
18	12:05 p m	7:35 p m							.62		S W	12	59.2	30.30	95	
19											N E	3	57.5	30.25	94	
20	4:00 a m	6:00 a m							.03		N E	3	67.5	30.06	91	
21	5:00 p m	5:30 p m							.30		S W	20	74.7	29.97	92	Thunder storm.
"	5:50 p m	6:50 p m	.17	5:00 p m	.27	5:00 p m	.3	5:00 p m	.03							
22	2:50 p m	12:00 p m	.12	3:00 p m	.16	2:55 p m	.36	2:50 p m	.36		S W	5	67	29.95	93	
23	9:00 a m	7:15 p m	.10	3:08 p m	.16	3:03 p m	.53	3:00 p m	2.04		S W	12	64.7	29.77	97	
"	12:00 p m	9:00 a m														
24	4:45 p m	5:15 p m	.15	4:43 p m	.22	4:43 p m	.25	4:40 p m	.25		S W	18	69	29.76	88	Thunder storm.
"	5:50 p m	7:50 p m							.30							
25											N W	8	55.7	29.67	85	
26											N W	4	51.5	30.22	78	
27	5:15 a m	5:25 a m							*		S W	4	57.2	30.20	89	
28	3:15 p m	12:00 p m	.07	5:03 p m	.10	5:00 p m	.28	4:15 p m	1.22		N	10	64	30.08	99	
29	12:00 p m	11:00 a m	.07	3:10 a m	.13	3:07 a m	.46	3:45 a m	2.45		N W	12	51.2	29.84	92	
30											N	7	57.7	30.05	85	
	Total---								10.07				Av. 68.1	Av. 30.04	Av. 89.7	

* Too small to be measured.
Depth of 10 inches snow averages 1 inch rain.

MONTHLY REPORT OF PRECIPITATION (Rain and Melted Snow)

As observed at Newark Public High School, by Prof. William Wiener, with U. S. Gov. Rain Gauge.

OCTOBER, 1907. Elevation of gauge above sea level, 180 feet. TABLE NO. 10.

Day of Month.	Beginning.	Ending.	Max. in 5 min. in Inches.	Beginning.	Max. in 10 min. in Inches.	Beginning.	Max. in 1 hour in Inches.	Beginning.	Am't of Rain or Melted Snow in Inches.	Depth of Snow in Inches.	Gen'l Direction of Wind.	Max. Vel. Wind Miles per hour.	Average Temperature.	Barometer.	Humidity.	Remarks.
1											N W	6	53.7	30.16	85	Meteoric shower.
2											S W	6	55	30.17	85	
3											S W	5	65.5	30.04	90	
4	7:10 a m	11:10 a m	.03	10:30 a m	.06	10:30 a m	.25	10:00 a m	.44		S W	7	67.7	29.68	93	
5	3:45 p m	4:00 p m							.01		N W	6	56.2	29.76	82	
"	5:00 p m	6:45 p m					.03	5:00 p m	.03							
6											S W	12	52.7	30.05	85	
7											S W	20	61.2	29.97	82	
8	1:10 a m	6:10 a m	.25	8:50 a m	.35	8:50 a m	.41	8:50 a m	.75		N W	30	54.5	29.92	83	
"	8:45 a m	9:45 a m							.51							
9											W	6	44.2	30.24	86	
10	11:10 p m	11:30 p m					.01	11:10 p m	.01		S E	8	50.2	30.07	83	
11											S E	30	55.2	29.94	82	
12											N W	12	51	30.04	82	
13											N W	7	49	30.07	77	
14											N W	10	47.5	30.19	81	
15											N W	7	47.5	30.27	84	
16											S W	15	51.6	30.39	81	
17											S W	15	58.2	30.28	82	
18											N W	20	55.7	30.06	82	
19											N W	10	44.5	30.23	80	
20	4:00 p m	6:05 p m							.04		N W	12	44.2	30.06	88	
21											N W	20	37.7	30.20	75	
22											S W	20	47.2	30.07	78	
23											W	30	48.5	29.85	75	
24											N W	30	44.2	30.06	72	
25											S W	20	48.7	29.97	69	
26											N W	10	42.2	30.21	78	
27	12:45 p m	12:00 p m					.21	10:35 p m	.53		S E	12	50	30.22	95	
	11:35 p m	12:00 p m	.26	3:00 a m	.40	3:00 a m	1.00	2:25 a m	.10		N W	20	53.2	29.61	95	
	12:00 p m	12:00 a m							3.30							
29	12:00 p m	4:00 a m					.15	3:00 a m	.35		N W	20	46.2	29.77	88	
30											N W	30	40.7	30.20	83	
31											N W	20	42	30.47	70	
	Total								6.07				Av. 50.9	Av. 30.06	Av. 82.2	

* Too small to be measured.
Depth of 10 inches snow averages 1 inch rain.

MONTHLY REPORT OF PRECIPITATION (Rain and Melted Snow)

As observed at Newark Public High School, by Prof. William Wiener, with U. S. Gov. Rain Gauge.

NOVEMBER, 1907. Elevation of gauge above sea level, 180 feet. TABLE NO. 11.

Day of Month.	Beginning.	Ending.	Max. in 5 min. in Inches.	Beginning.	Max. in 10 min. in Inches.	Beginning.	Max. in 1 hour in Inches.	Beginning.	Am't of Rain or Melted Snow in Inches.	Depth of Snow in Inches.	Gen'l Direction of Wind.	Max. Vel. Wind Miles per hour.	Average Temperature.	Barometer.	Humidity.	Remarks.
1											S E	6	43.5	30.35	85	
2	11:00 a m	12:00 p m							.55		S E	20	52	29.82	99	
3	12:00 p m	2:00 a m							.10		S W	20	48.5	29.69	87	
4											S W	12	48	29.92	82	Election Day.
5											S W	10	50.2	29.96	82	
6	12:50 a m	9:30 p m	.04	7:00 p m	.05	7:00 p m	.13	6:30 p m	2.15		S	20	52.5	29.58	99	
7											S W	20	45.2	29.50	87	
8											S W	15	45.7	29.94	82	
9											S	6	49.5	29.92	79	
10	2:00 a m	12:00 a m							.08		S W	15	49.5	29.84	96	
11											N W	15	41.2	30.08	80	
12											N W	8	39	30.25	75	
13											S W	20	36.7	30.04	80	
14											N W	12	34.5	30.15	75	
15											S E	3	36	30.26	77	
16											S W	3	38.5	30.24	85	
17											S	5	40	30.27	79	
18	12:00 a m	12:00 p m							.66		S	15	38.2	30.22	95	
19	12:00 p m	2:40 a m							.34		N W	15	44	30.14	86	
20											N E	12	45.7	30.36	86	
21	12:15 p m	7:00 p m							.07		S E	10	48.7	30.16	99	
22	11:00 p m	12:00 p m							*		N W	12	50.2	30.18	90	
23	12:00 p m	10:00 p m									N E	15	45.2	30.21	84	
24											N E	30	35	30.08	100	
25											N W	30	40	29.92	92	
26	9:00 a m	12:00 a m							.025	.25	S W	25	35.2	29.81	86	Thanksgiving Day.
27											S W	30	40	29.98	89	
28											S W	15	46	29.86	82	
29											N W	12	37.5	30.11	89	
30											S E	12	39.2	30.11	84	
	Total---								5.015	.25			Av. 43	Av. 30.03	Av. 80.6	

* Too small to be measured.
Depth of 10 inches snow averages 1 inch rain.

MONTHLY REPORT OF PRECIPITA

As observed at Newark Public High School, by Prof.

OCTOBER, 1907. Elevation of gauge above s

Day	Beginning.	Ending.	Max. in 5 min. in Inches.	Beginning.	Max. in 10 min. in Inches.	Beginning.	Max. in 1 hour in Inches.	Beginning.	Am't of Rain or Melted Snow in Inches.	Depth of Snow in Inches.	Gen'l Direction of Wind.	Max. Vel. Wind Miles per hour.	Average Temperature.	Barometer.	Humidity.	Remarks.
1											N W	6	53.7	30.16	85	Meteoric shower.
2											S W	6	55	30.17	85	
3											S W	5	65.5	30.04	90	
4	7:10 a m	11:10 a m	.03	10:30 a m	.06	10:30 a m	.25	10:00 a m	.44		S W	7	67.7	29.68	93	
5	3:45 p m	4:00 p m							.01		N W	6	56.2	29.76	82	
"	5:00 p m	6:45 p m					.03	5:00 p m	.03							
6											S W	12	[illegible]	30.05	85	
7											S W	20	[illegible]	29.97	82	
8	1:10 a m	6:10 a m	.25	8:50 a m	.35	8:50 a m	.41	8:50 a m	.75		N W	30	[illegible]	29.92	83	
"	8:45 a m	9:45 a m							.51							
9											W	6			86	
10	11:10 p m	11:30 p m					.01	11:10 p m	.01		S E	8			83	
11											S	30			82	
12											N	12			82	
13											N	7			77	
14											N	10				
15											N W	7	47.5	30.27	84	
16											S W	15	51.6	30.39	81	
17											S W	15	58.2	30.28	82	
18											N W	20	55.7	30.06	82	
19											N W	10	44.5	30.23	80	
20	4:00 p m	6:05 p m							.04		N W	12	44.2	30.06	88	
21											N W	20	37.7	30.20	75	
22											S W	20	47.2	30.07	78	
23											W	30	48.5	29.85	75	
24											N W	30	44.2	30.06	72	
25											S W	20	48.7	29.97	69	
26											N W	10	42.2	30.21	78	
27	12:45 p m	12:00 p m					.21	10:35 p m	.53		S E	12	50	30.22	95	
	11:35 p m	12:00 p m	.26	3:00 a m	.40	3:00 a m	1.00	2:25 a m	.10		N W	20	53.2	29.61	95	
	12:00 p m	12:00 a m							3.30							
29	12:00 p m	4:00 a m					.15	3:00 a m	.35		N W	20	46.2	29.77	88	
30											N W	30	40.7	30.20	83	
31											N W	20	42	30.47	70	
	Total....								6.07				Av. 50.9	Av. 30.06	Av. 82.2	

* Too small to be measured.

HOUSE CONNECTIONS, 1907.

STREET.	LOCATION.	Number of Connections.	Length in feet.	Cost.	Assessed to Property.
	Laid Under Law of 1896.				
Central Ave.	Third St. to City Line	92	1,998	$ 935.81	$ 926.96
Grafton Ave.	Riverside Ave. to Washington Ave.	52	1,138	456.88	497.88
Vanderpool St.	Broad St. to Elizabeth Ave.	17	380	176.10	179.20
Meeker Ave.	Frelinghuysen Ave. westerly	18	162	65.78	83.78
Mulberry Place	Mulberry St. to N. J. Railroad Ave.	8	160	71.25	72.00
Columbia St.	Hamilton St. to Elm St.	2	48	24.64	22.64
Magnolia St.	Springfield Ave. to Fairview Ave.	23	326	155.67	161.92
Fabyan Place	Clinton Ave. to Shaw Ave.	149	2,502	1,093.78	1,206.38
Total		361	6,714	$ 2,979.91	$ 3,150.76
	Laid Under Law of 1907.				
Fairmount Ave.	Bergen St. to Fifteenth Ave.	25	552	$ 248.12	$ 256.37
Ridgewood Ave.	Clinton Ave. to Avon Ave.	12	258	132.98	120.78
Farley Ave.	Clinton Ave. to Avon Ave.	28	554	235.07	263.07
Treacy Ave.	Clinton Ave. to Avon Ave.	6	120	54.80	57.60
Baldwin Ave.	Clinton Ave. to Avon Ave.	2	44	18.20	20.20
Hillside Ave.	Hawthorne Ave. to Bigelow St.	97	2,168	900.12	982.62
Plane St.	Court St. to William St.	3	64	28.71	28.96
Chadwick Ave.	Rose St. to Hawthorne Ave.	64	1,206	536.01	576.76
New St.	Arch St. to Second St.	39	688	393.18	410.03
Ninth Ave.	South 14th St. to City Line	1	20	8.60	9.60
Silk St.	Academy St. to Bank St.	5	34	36.75	41.75
Avon Ave.	Bergen St. to City Line	108	2,586	1,084.51	1,182.66
Bergen St.	Hawthorne Ave. to Renner Ave.	93	1,660	682.44	770.44
Fifth St.	Third Ave. to Bloomfield Ave.	67	1,246	514.70	565.40
Total		550	11,200	$ 4,874.19	$ 5,286.24
	Laid by City.				
Barbara St.		4	64		$ 36.00
Oliver St.		27	434		244.00
Leslie St.		20	366		203.00
Poinier St.	Elizabeth Ave. to Frelinghuysen Ave.	6	112		62.00
Stanton St.	Elizabeth Ave. to Frelinghuysen Ave.	20	360		200.00
New York Ave.	N. J. Railroad Ave. to Adams St.	27	588		321.00
Beacon St.	South Orange Ave. to Springfield Ave.	2	36		20.00
Clifton Ave.	Abington Ave. to Delavan Ave.	29	588		328.00
Homestead Park	Clinton Place to Hawthorne Ave.	15	138		84.00
Clover St.	Jackson St. to Chambers St.	8	132		74.00
Ferguson St.	Clover St. to Market St.	2	36		20.00
Woodside Ave.	Grafton Ave. to Montclair Ave.	15	364		184.00
Wall St.	Ferry St. to Darcy St.	22	456		250.00
Lentz Ave.	Ferry St. to Horatio St.	10	158		89.00
Verona Ave.	Riverside Ave. to Washington Ave.	15	390		210.00
Houston St.	Elm Road to Hamburgh Place	31	496		279.00
Austin St.	Thomas St. to Emmet St.	26	292		169.25
Fourth St.	Warren St. to Orange St.	44	704		443.25
Fifth St.	Park Ave. to Third Ave.	77	1,454		802.85
South Tenth St.		80	1,532		847.50
Total		480	8,700	$ 4,831.55	$ 4,866.85
Grand Total		1,391	26,614	$12,685.65	$13,303.85

	Nature of Soil.	Contractor.	Remarks.	Date.
East Branch Is				

NAME.	r.		Statement Number.	Remarks.	Date.
Bigelow St.	Jelliff Ave. to			Under sidewalk, north side	April
Hillside Ave.	Between Haw	st. Co.			May
Fifteenth Ave.	Fourteenth S	ig Co.	275		July
Fifteenth Ave.	Twelfth St. t	ubin			June
New York Ave.	Garrison St.		276		Aug.
Woodside Ave.	Montclair Av				July
Grove St.	Grain St. no				March
Parker St.	Abington Ave	k		Harrison Van Duyne & Son, Eng'rs	
Sussex Ave.	Near Third	el	274		July
Fifteenth Ave.	Tenth St. to	der	277		Sept.
Oraton St.	Hinsdale Pla				Oct.
Thirteenth Ave.	South 11th S				Nov.
Silver St.	Smith St. to				Dec.
Isabella Ave.	Plymouth St		280		Dec.
Bigelow St.	Milford Ave.	son	278	Under sidewalk, north side	
Totals					

Amsterdam				
Magazine				
Margaretta				
Frankfort	Sand, water, red soil	James J. Fusco	711' of 8" underdrain	Dec. 30
Meadow Brook				
	Water, rock, red soil			
		Wm. J. McCloud & Co.	Not completed	
Total				

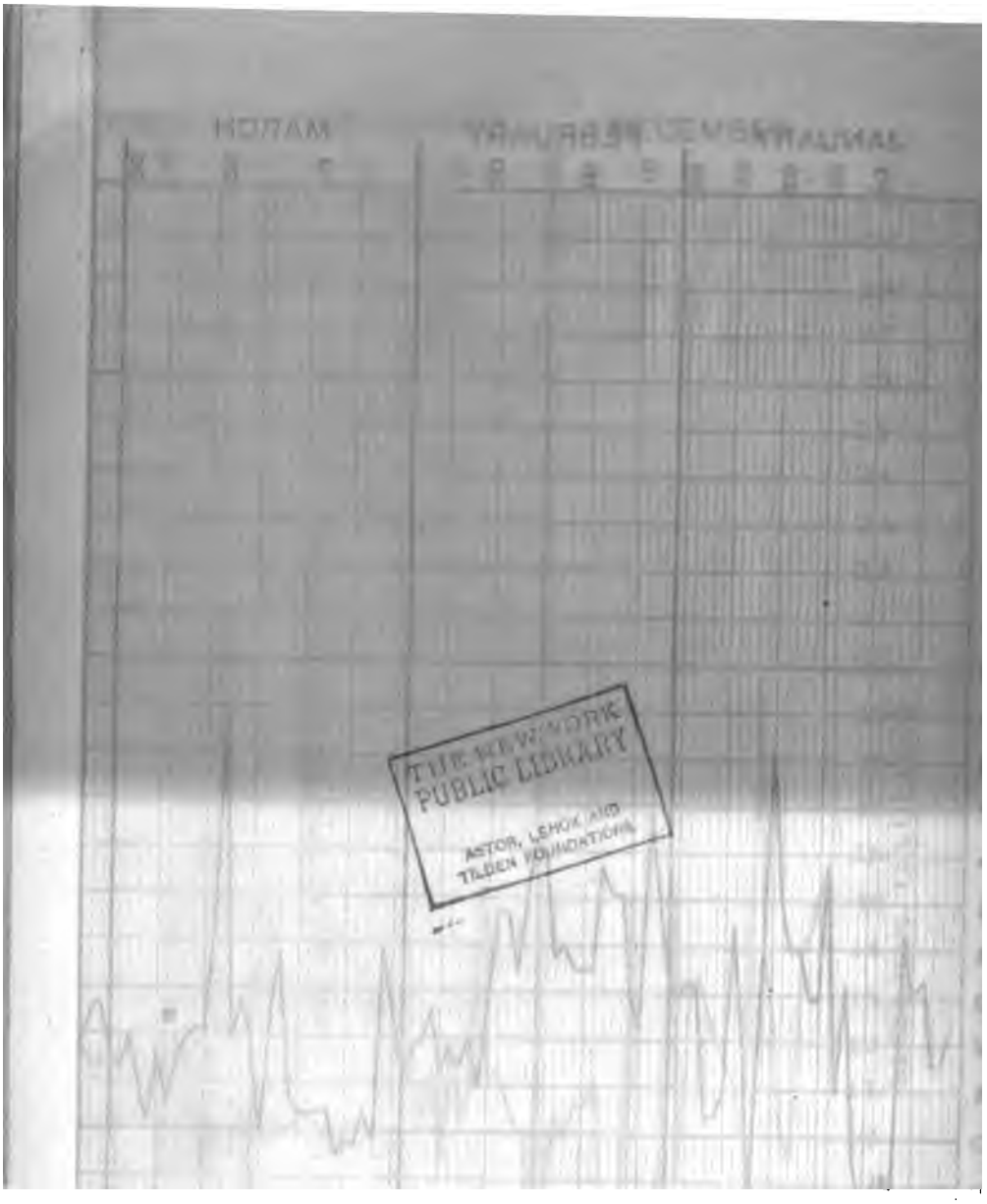
	Nature of Soil.	Contractor.	Remarks.	Date.
East Branch Ir				

NAME.	r.	Statement Number.	Remarks.	Date.
Bigelow St.	Jelliff Ave. to		Under sidewalk, north side	April
Hillside Ave.	Between Hay st. Co.			May
Fifteenth Ave.	Fourteenth St. ag Co.	275		July
Fifteenth Ave.	Twelfth St. to ubin			June
New York Ave.	Garrison St.	276		Aug.
Woodside Ave.	Montclair Av			July
Grove St.	Grain St. no			March
Parker St.	Abington Av k		Harrison Van Duyne & Son, Eng'rs	
Sussex Ave.	Near Third bel	274		July
Fifteenth Ave.	Tenth St. to der	277		Sept.
Oraton St.	Hinsdale Pla			Oct.
Thirteenth Ave.	South 11th St			Nov.
Silver St.	Smith St. to			Dec.
Isabella Ave.	Plymouth St	280		Dec.
Bigelow St.	Milford Ave. son	278	Under sidewalk, north side	
Totals				

Amsterdam				
Magazine				
Margaretta				
Frankfort	Sand, water, red soil	James J. Fusco	711' of 8" underdrain	Dec. 30
Meadow Brook				
	Water, rock, red soil			
		Wm. J. McCloud & Co.	Not completed	
Tota				

	Nature of Soil.	Contractor.	Remarks.	Date.
East Branch In				
Berlin St.			Commenced in 1906	
Avenue L				
Brill St.			8" and 10" underdrain	
Brinsmaid	Sand and water		Brick and concrete	
Horatio St.	Sand and water		Brick and concrete	
Manufactur	Sand and water		Brick and concrete	
Ferry St.	Sand and water	Wm. J. McCloud & Co.		June 24
Sixteenth Ave.	Hard pan		On bottom boards	
Sixteenth A			On concrete cradle	
	Hard pan	James A. Christie	Commenced in 1906	May 27
Garden St. Sev	Sand	James A. Christie		May 27
Montclair Ave.	Red Soil	D'Amato & Stefanelli		May 27
Clifton Ave. Se	Red soil, clay, rock	James A. Christie		June 24
Fabyan Place S	Red soil	D'Amato & Stefanelli		June 24
Malvern St. Sev	Sand and water	James A. Christie		July 29
German St. Sev	Red soil	D'Amato & Stefanelli		July 29
Rose St. Sewe	Red soil	D'Amato & Stefanelli		Aug. 26
Ridge St. Sewe	Filled ground	Pasquale Cestone		Aug. 26
Stuyvesant Ave				
Stuyvesant				
Commonwe	Red soil, boulders	James A. Christie		Aug. 26
Henry St. Sewe	Red soil	James A. Christie		Aug. 26
Murray St. Sev	Sand	Antonio Miele		July 29
Murray St. Sev	All sand	D'Amato & Stefanelli		Sept. 30
Bonykamper A				
Bonykampe				
Hawkins St	Sand	James A. Christie		Sept. 30
Washington Av				
Washington				
North End	Sand and gravel	James A. Christie		Sept. 30
Augusta St. Se				
Augusta St				
Nicholson				
Landers Al	Rock and hard pan	James A. Christie		Sept. 30
Berkeley Ave.				
Berkeley A				
Fifth St. a				
Chester Ave	Rock and hard pan	James A. Christie		Oct. 28
North 13th St.				
	Rock and hard pan	Zizzo & Cavalluzzo		Oct. 28
Lentz Ave. Se	Sand	James A. Christie		Oct. 28
Peddie St. and				
Section				
Badger Ave	Rock-f'ld gr'd & red soil		On bottom boards	
Boyd St.				
Hayes St.				
		Harrison Const. Co.		Dec. 30
Vincent St. Se	Sand	James A. Christie		Dec. 30
Tyler St. Sewe				
Tyler St.				
Clifford St.				
Chestnut S	Sand, water, red soil	James A. Christie		Dec. 30
East Branch La				
Hamburg				
Avenue L				
Herbert St				
Amsterdam				
Magazine				
Margaretta				
Frankfort	Sand, water, red soil	James J. Fusco	711' of 8" underdrain	Dec. 30
Meadow Brook				
	Water, rock, red soil			
		Wm. J. McCloud & Co.	Not completed	
Total				

MILLION GALLONS



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City Clerk

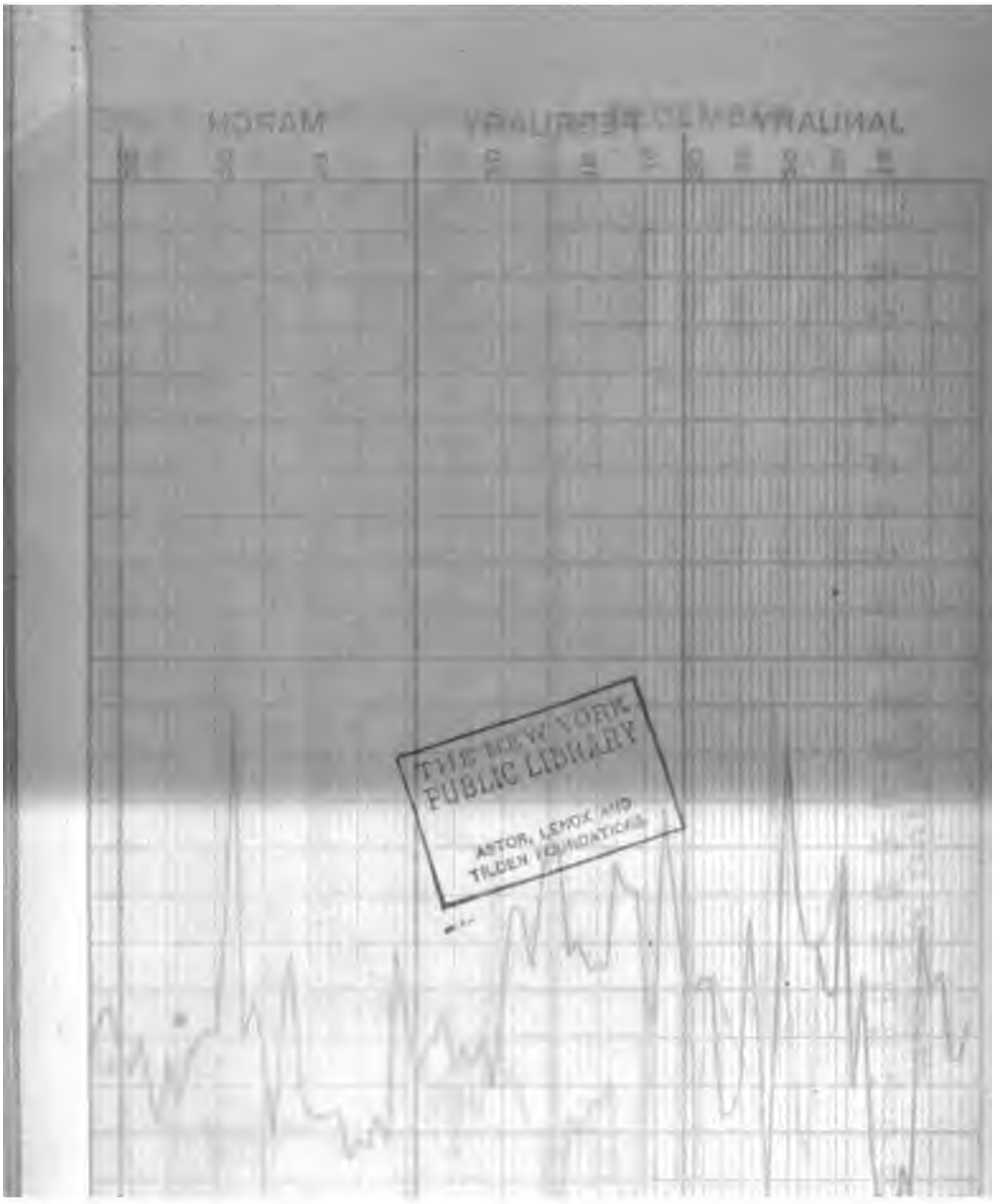
ANNUAL REPORT

OF THE

Board of Street and Water Commissioners

OF THE CITY OF
NEWARK, N. J.

FOR THE YEAR
1908



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FOR THE YEAR
1908

ANNUAL REPORT

OF THE

Board of Street and Water Commissioners

OF THE

CITY OF NEWARK, NEW JERSEY

FOR THE YEAR ENDED DECEMBER 31, 1908

OFFICERS AND MEMBERS

PRESIDENT.....FRANK J. BOCK, 10 Renner Ave.
CITY COUNSEL.....JAMES R. NUGENT, 614 High St.
CLERK OF THE BOARD.....WM. E. GREATHEAD, 24 Milford Ave.
ASST. CLERK OF THE BOARD....ALFRED L. SWAIN, 734 Lake St.
CHIEF ENGINEER.....MORRIS R. SHERRERD, 938 Broad St.
SEC. TO CHIEF ENGINEER..... J. G. WOLBER, 33 Hazelwood Ave.
GENERAL SUP'T. OF WORKS CHAS. M. SHIPMAN, 106 Lincoln Ave.
ENGINEER AND SUP'T. DEP'T. OF WATER GEORGE SANZENBACHER, 276 South 6th St.
ENGINEER, DEP'T. OF STREETS & HIGHWAYS WM. A. HOWELL, 684 Parker St.
ENGINEER, DEP'T. OF SEWERS & DRAINAGE EDWARD S. RANKIN, 751 High St.
CASHIER, DEP'T. OF WATER..H. D. NORTHROP, 28 Waverly Ave.

COMMISSIONERS.	RESIDENCE.
FRANK J. BOCK	10 Renner Ave.
ARTHUR R. DENMAN	946 Broad St.
AUGUSTUS F. EGGERS	21 South 10th St.
THOMAS F. HALPIN	412 Lafayette St.
GEORGE H. LAMBERT	54 North 7th St.

To the Honorable the Mayor and Common Council of the City of Newark, N. J.:

Pursuant to law, the Board of Street and Water Commissioners of the City of Newark, N. J., hereby presents its annual report, showing the condition of the public works and property of the City under the government, control and management of said Board, for the fiscal year ended December 31st 1908.

ANNUAL REPORT

OF THE

Board of Street and Water Commissioners

To the Board of Street and Water Commissioners of the City of Newark, N. J.:

GENTLEMEN:—Herewith are transmitted detailed reports of the several departments under the control of your Board for the year ended December 31st, 1908, which have been arranged for presentation to the Mayor and Common Council of the City in accordance with Section 20 of Chapter 134 of the State Laws of 1891.

Respectfully submitted,

MORRIS R. SHERRERD,

Chief Engineer.

ANNUAL REPORT

OF THE

GENERAL SUPERINTENDENT OF WORKS

ANNUAL REPORT

OF THE

General Superintendent of Works

NEWARK, N. J., December 31, 1908.

MR. MORRIS R. SHERRERD, CHIEF ENGINEER,

Board of Street and Water Commissioners of the City of Newark, N. J.:

DEAR SIR:—Herewith is submitted the annual report, for the year 1908, of the operation and expenditures of the various departments under the supervision of the General Superintendent of Works.

The increased appropriation has enabled us to do much more work in street cleaning, repairs and grading than has been done in previous years. This will be noticed by a comparison with former reports.

Submitted for your inspection in a condensed tabulated form are reports of the amount of work in the several departments, the same compiled from records in my office; also distribution of pay rolls. A perusal of these will show a careful system of records.

We have rented the property at Nos. 6, 7, 8, 9 Campfield Place, which will be known as Branch Stable No. 1. It has accommodation for eighteen horses and ample room for tools, implements, carriages, carts, etc. This will be a great saving of expense, as it will be the central starting point of laborers, sweeping machines and carts for work to be done in the centre of the City, as heretofore there was quite a loss of time in reaching the work from our Eighth Avenue Stables.

REPORT 1908

STREETS AND HIGHWAYS

DISBURSEMENTS.

(Street Cleaning.)

1908.	Weekly Pay Rolls	Bills	Monthly Pay Rolls	Total
January	$20,584.45	.....	$416.66	$21,001.11
February	16,288.75	$1,784.54	416.66	18,489.95
March	24,965.24	4,696.82	416.66	30,078.72
April	29,014.65	192.59	596.66	29,803.90
May	19,723.05	4,052.03	506.66	24,281.74
June	22,439.45	1,342.33	506.66	24,288.44
July	19,674.35	1,727.74	506.66	21,908.75
August	16,134.16	1,250.76	506.66	17,891.58
September	16,746.55	1,422.27	506.66	18,675.48
October	19,999.97	1,615.51	506.66	22,122.14
November	14,893.30	1,094.91	506.66	16,494.87
December	17,726.61	1,428.64	506.74	19,661.99
Totals	$238,190.53	$20,608.14	$5,900.00	$264,698.67

(Street Repairs.)

1908.	Weekly Pay Rolls	Monthly Pay Rolls	Bills	Total
January.....	$1,327.80	$276.66	.....	$1,604.46
February	491.70	276.66	$2,030.89	2,799.25
March	1,424.04	276.66	228.85	1,929.55
April	4,368.25	456.66	239.85	5,064.76
May	2,875.80	366.66	7,052.75	10,295.21
June	2,952.16	366.66	1,814.61	5,133.43
July	2,404.10	366.66	1,603.35	4,374.11
August	1,646.58	366.66	2,066.19	4,079.43
September	1,558.44	366.66	3,049.89	4,974.99
October	2,131.22	366.66	1,445.07	3,942.95
November	1,424.76	366.66	425.42	2,216.84
December	1,664.76	366.74	1,623.24	3,654.74
Totals	$24,269.61	$4,220.00	$21,580.11	$50,069.72

(City Stables.)

1908.	Weekly Pay Rolls	Bills	Total
January	$1,138.20	.....	$1,138.20
February	1,079.55	$741.21	1,820.76
March	1,156.45	269.99	1,426.44
April	1,188.60	709.84	1,898.44
May	1,386.85	601.81	1,988.66
June	1,136.60	758.83	1,895.43
July	1,354.70	643.14	1,997.84
August	1,090.40	699.03	1,789.43
September	1,019.20	665.08	1,684.28
October	1,266.44	1,400.18	2,666.62
Nevember	1,192.80	1,056.96	2,249.76
December	1,951.50	3,412.33	5,363.83
Totals	$14,961.29	$10,958.40	$25,919.69

(Miscellaneous.)

1908.	Bills	Monthly Pay Rolls	Total
January	.....	$100.00	$100.00
February	$10.00	100.00	110.00
March	270.35	100.00	370.35
April	25.00	100.00	125.00
May	57.05	100.00	157.05
June	246.22	100.00	346.22
July	18.75	100.00	118.75
August	9.50	100.00	109.50
September	5.00	100.00	105.00
October	448.80	100.00	548.80
November	219.84	100.00	319.84
December	181.55	100.00	281.55
Totals	$1,492.06	$1,200.00	$2,692.06

RECAPITULATION OF DISBURSEMENTS.

Street Cleaning	$264,698.67
Street Repairs	50,069.72
City Stables	25,919.69
Miscellaneous	2,692.06
Total disbursements, Streets and Highways	$343,380.14

OFFICE OF

General Superintendent of Works

(Condensed Report of Street Cleaning.)

	Cubic Yards	Miles	Cost
Cleaning pavements by machine....	24,444	2,197.96	$37,618.55
" block pavement by hand...	40,319	3,216.10	64,718.44
" Telford pavement, by hand	2,662	221.42	2,887.50
" Cobble pavement by hand	2,021	93.26	2,977.65
" asphalt pavement by hand	27,833	8,191.48	34,334.10
" brick pavement by hand..	9,871	1,707.13	14,677.20
" wood pavement by hand..	163	11.38	60.96
Flushing		297.69	1,059.90
Cleaning bitulithic pavement by hand	3,183	544.73	4,081.60
Cleaning gutters and spots by hand	2,624		3,674.51
Cleaning Intersections (Detail).....	5,319		9,647.50
Picking papers (5,468) bags.....			634.95
City dumps, leveling.....			4,539.95
Carpenter and Helper.....			19.00
Scavenger inspectors (special).....			2,180.00
Removing obstructions.....			328.00
Removal of snow.....	77,984		16,257.97
Acting foreman.....			2,724.97
Trolley inspectors (Special).....			520.00
Sidewalk inspectors (Special).....			837.50
Special inspectors.....			1,020.36
Inspectors on conduits.....			234.50
Cleaning cross walks.....			239.00
Carting and spreading sand.....			115.90
Cleaning stable yard.....	27		54.55
Grading City dumps.....			78.00
Miscellaneous	17		238.40
Weekly salaries.....			32,429.57
Totals	196,467	16,481.15	$238,190.53

CONDENSED REPORT OF STREETS GRADED, REPAIRED, ETC.

	Loads	Miles	Cost
Dirt streets graded and filling depressions	193		$1,701.30
Filling in Plum Point Lane	258		338.47
Dirt streets graded by machine		73.65	3,149.45
Helpers for surveyor's department			2,702.27
Carpenter and helper			63.00
Cobble pavements repaired (33 places)			310.20
Block pavements repaired (743 places)			5,458.40
Brick pavements repaired (138 places)			1,281.15
Telford pavements repaired (34 places)			110.60
Engineer on steam roller			807.50
Keeper of stone yard			711.00
Lampman			803.60
Inspector of cuts and depressions			180.00
Foreman			1,099.00
Telford repairs and oiling Sussex Ave			2,166.05
" " " " Elizabeth Ave			608.40
" " " " Clinton Pl			463.55
" " " " High St			136.25
" " " " Riverside Ave			23.95
Telford repairs Maple Ave			404.10
" " Ogden St			236.40
" " Clifton Ave			37.95
" " Vroom Alley			17.20
" " Chancellor Ave			126.55
" " Warren St			63.85
" " Ridge and Parker Sts			69 80
" " Ballantine Parkway			64.00
Telford streets oiled, Lincoln Ave			83.50
" " " Elwood Ave. and Elwood Pl			26.75
Inspector to repairs on Clay St. bridge approach			43.75
Taking up car tracks, South Tenth St			185.46
Resetting lamp posts			35.20
Cutting weeds			34.05
Inspectors on conduits			294.00
Grading stable yard			65.10
Removing trees			56.40
Carting brick fo surveyor's department			13.30
Inspector on Badger Ave. sewer			122.50
Painting			30.00
Raising manholes, Sussex Ave			13.50
Cleaning gutters, Sussex Ave			19.85

Putting up signs	24.40
Miscellaneous	87.86
Total weekly pay rolls	$24,269.61

REPAIRS AND OILING TELFORD STREETS.

	Stone	Oil	Coal	Labor	Total
Sussex Ave.	$5,873.87	$474.47	$147.83	$2,562.55	$9,058.72
Elizabeth Ave.	497.50	392.69	6.00	646.70	1,542.89
Maple Ave.	902.43		5.75	421.44	1,329.62
High St.	27.75	471.63		129.10	628.48
Clinton Pl.	926.85	132.73	17.50	566.09	1,643.17
Ogden St.	799.20		35.94	383.98	1,219.12
Elwood Pl. / Elwood Ave.		198.71		55.45	254.16
Lincoln Ave.		223.84		54.80	278.64
Clifton Ave.	83.25		3.00	58.45	144.70
Riverside Ave.	22.20	47.66		27.28	97.14
Vroom Alley	55.50			29.12	84.62
Chancellor Ave.	344.10		5.75	188.04	537.89
Warren St.	122.10		10.50	132.18	264.78
Ballantine P'way	266.40		18.00	104.82	389.22
Ridge St. and Parker St.	227.55			89.98	317.53
Totals	$10,148.70	$1,941.73	$520.27	$5,449.98	$17,790.68

COST OF FILLING IN PLUM POINT LANE.

Slag	$30.90
Labor	365.41
Total cost	$396.31

CITY STABLES.

Carpenter and helper	$964.80
Engineer on steam roller	94.50
Drivers cleaning horses	579.90
Painting	426.00
Extra helpers	811.30
Repairing roof	8.00
Weekly salaries	12,076.79
Total weekly pay rolls	$14,961.29

RECAPITULATION OF WEEKLY PAY ROLLS.

1908.	
Street cleaning	$238,190.53
Street repairs	24,269.61
City stables	14,961.29
Total weekly pay rolls	$277,421.43

CITY STABLES.

TOTAL COST OF CITY STABLES, HARNESS SHOP AND BLACKSMITH SHOP, INCLUDING AMOUNTS PAID BY DEPARTMENTS OTHER THAN STREETS AND HIGHWAYS.

Streets and highways charged directly to this account	$25,919.69
Bills paid by other departments.	
Sewers and drainage	3,091.39
Crosswalks	360.63
Repairs to asphalt streets	659.82
Shade Tree Commission	35.00
Public lighting	290.00
Total	$30,356.53

RECEIPTS.

Dep't. of Water, board of horses, horse shoeing and harness repairs	$1,719.93	
Dep't. of Sewers and Drainage, horse shoeing, wagon and harness repairs	527.70	
Dep't. of Public Lighting, horse shoeing, wagon and harness repairs	90.50	
Dep't. of Crosswalks, horse shoeing and harness repairs	126.35	
Dep't. of Sidewalks, carriage hire	212.00	
Shade Tree Commission, horse shoeing, harness repairs and board of horse	298.00	
Total receipts		2,974.48
		$27,382.05

RECEIPTS.

1908.

(Street Cleaning.)

Sale of manure	$24.00	
Redemption	237.05	
House moving fee	190.00	
Removal of snow	44.18	
Horse shoeing	568.08	
Sale of old iron	58.00	
Unclaimed money from pay rolls	124.12	
Sale of old harness	5.00	
Return of badge	1.00	
Damage to harness	10.00	
Board of horses	1,412.00	
Sale of horses	20.00	
Sale of old dump wagon	20.00	
Carriage hire	169.60	
Harness repairs	147.74	
Wagon repairs	99.36	
		$3,130.13

(Street Repairs.)

Street openings	$3,178.50	
Street repairs	1,288.97	
Sale of stone	260.50	
Inspectors on conduits, etc.	1,655.50	
Horse shoeing	142.27	
Sale of old carriage	7.00	
Resetting lamp posts	83.20	
Repairing approaches to Clay St. bridge	1,943.17	
Board of horses	353.00	
Relaying gutters	22.00	
Use of steam roller	18.00	
Carriage hire	42.40	
Harness repairs	36.69	
Wagon repairs	24.84	
		$9,056.04
Total receipts for streets and highways		$12,186.17

STREETS AND HIGHWAYS.

RECEIPTS AND APPROPRIATIONS.

Balance, 1907	$105.83	
Tax ordinance appropriation	233,000.00	
Supplemental appropriation	30,000.00	
Advance appropriations	37,000.00	
Additional appropriation	35,000.00	
Receipts, 1908	12,186.17	
		$347,292.00
Total disbursements		343,380.14
Balance		$3,911.86

DISTRIBUTION OF WEEKLY PAY ROLL.

STREET CLEANING.

MONTH	Foreman	Supt. Sweeps	Time-keeper	Clerk	Detail	Inspec-tors	Keeper Tools	Laborers	Drivers	H. & W. Hire	Acting Forem'n	Sun-dries	S'walk Insp.	Special Insp.	Elec. Mach.	Steno.	Total
January	$ 1,588.33	$ 92.00	$ 100.00	$ 80.00	$ 48.00	$ 132.00	$ 60.00	$ 12,791.60	$ 974.25	$ 4,384.60	$ 91.67	$161.50	$ 80.50	.....	.....	.....	$ 20,584.45
February	1,694.00	92.00	100.00	80.00	48.00	147.00	60.00	9,252.60	907.75	2,856.90	467.50	98.00	345.00	$ 20.00	.....	.....	16,288.75
March	1,611.00	92.00	100.00	20.00	48.00	117.00	60.00	15,395.45	927.75	4,443.40	550.64	45.00	375.00	1,012.00	.....	.....	24,965.24
April	1,574.00	92.00	100.00	.....	48.00	261.00	60.00	18,018.00	803.75	5,078.40	541.00	99.00	247.50	1,822.00	.....	.....	29,014.65
May	1,992.00	115.00	125.00	75.00	60.00	180.00	75.00	11,195.90	1,018.25	4,453.65	368.00	25.25	.....	.....	$ 22.50	.....	19,723.05
June	1,654.00	92.00	100.00	60.00	48.00	72.00	60.00	13,327.40	1,090.50	5,495.55	225.00	5.00	.....	90.00	60.00	.....	22,439.45
July	2,733.10	115.00	125.00	75.00	60.00	90.00	75.00	10,437.50	1,164.50	4,525.25	150.00	22.00	.....	42.00	30.00	.....	19,674.35
August	2,095.20	92.00	100.00	60.00	48.00	72.00	60.00	8,338.30	1,039.75	4,057.85	.....	13.00	.....	68.06	45.00	.....	16,134.16
September	1,972.00	92.00	100.00	60.00	48.00	141.00	60.00	8,506.00	1,007.50	4,483.85	.....	27.00	.....	84.20	30.00	.....	16,746.55
October	2,300.92	107.33	116.66	70.00	56.00	168.00	70.00	9,895.91	1,191.75	5,695.10	.....	13.00	.....	122.30	60.00	$ 54.00	19,909.97
November	1,980.00	92.00	100.00	60.00	32.00	144.00	60.00	7,636.60	783.00	3,641.20	.....	13.00	.....	159.50	60.00	72.00	14,893.30
December	2,970.00	138.00	150.00	90.00	72.00	216.00	90.00	8,849.56	923.50	3,819.55	.....	25.00	.....	90.00	90.00	113.00	17,726.61
Totals	$24,176.55	$1,211.33	$1,316.66	$730.00	$616.00	$1,740.00	$700.00	$133,784.82	$11,922.25	$52,935.30	$2,393.81	$546.75	$1,048.00	$3,510.06	$397.50	$239.00	$238,190.53

TROLLEY INSPECTOR.

January	.....
February	$120.00
March	165.00
April	180.00
May	17.50
June	60.00
July	30.00
August	45.00
September	45.00
October	70.00
November	60.00
December	90.00
	$882.50

DISTRIBUTION OF WEEKLY PAY ROLLS

STREET REPAIRS

	Detail Light	Keeper Stone Yard	Surveyors	F. D. Aber's Dept.	F. B. Knott's Dept.	Inspectors of Conduits	Sundries	P. S. Co., Work Arcade	Carpenter	Total
January	$ 98.00	$ 54.00	$ 210.00	$ 250.10	617.10	-------	98.30	------	------	$ 1,327.80
February	70.00	54.00	210.00	28.70	-------	-------	105.00	------	$24.00	491.70
March	56.00	54.00	210.00	439.55	624.49	-------	37.00	------	3.00	1,424.04
April	56.00	54.00	198.10	1,129.45	2,704.30	-------	112.40	------	24.00	4,368.25
May	70.00	67.50	241.50	879.85	1,521.05	-------	95.90	------	------	2,875.80
June	56.00	54.00	193.66	1,262.95	1,344.95	-------	40.60	------	------	2,952.16
July	70.00	67.50	239.84	1,043.86	932.15	-------	50.75	------	------	2,404.10
August	56.00	54.00	235.33	548.70	752.55	-------	-------	------	------	1,646.58
September	56.00	54.00	213.33	411.95	805.30	-------	10.00	$7.86	------	1,558.44
October	66.00	63.00	219.82	630.05	1,096.68	-------	55.67	------	------	2,131.22
November	56.00	54.00	200.46	444.95	627.35	$ 42.00	-------	------	------	1,424.76
December	84.00	81.00	305.66	479.90	459.20	252.00	3.00	------	------	1,664.76
Totals	$794.00	$711.00	$2,677.70	$7,550.31	$11,575.12	$294.00	$608.62	$7.86	$51.00	$24,269.61

DISTRIBUTION OF WEEKLY PAY ROLL.

CITY STABLES

MONTH	Blacksmith	Stableman	Helper	Painter	Assistant Machinist	Carpenter	Sundries	Engineer Steam Roller	Total
January	$ 144.00	$ 692.00	-------	$100.00	-------	$ 48.00	$ 154.20	-------	$ 1,138.20
February	144.00	692.00	$ 2.00	26.00	-------	48.00	167.55	-------	1,079.55
March	144.00	692.00	-------	48.00	-------	55.00	217.45	-------	1,156.45
April	144.00	692.00	8.00	34.00	-------	27.00	283.60	-------	1,188.60
May	180.00	865.00	40.00	-------	$15.00	72.00	214.85	-------	1,386.85
June	144.00	692.00	16.00	-------	30.00	57.00	197.60	-------	1,136.60
July	180.00	820.00	42.00	-------	-------	54.00	258.70	-------	1,354.70
August	144.00	632.00	36.00	-------	-------	51.00	227.40	-------	1,090.40
September	144.00	617.00	20.00	-------	-------	45.00	193.20	-------	1,019.20
October	168.00	765.69	48.00	66.00	-------	81.00	137.75	-------	1,266.44
November	144.00	660.00	48.00	72.00	-------	90.00	178.80	-------	1,192.80
December	216.00	1,116.00	82.00	108.00	-------	87.00	279.50	$63.00	1,951.50
Totals	$1,896.00	$8,935.69	$342.00	$454.00	$45.00	$715.00	$2,510.60	$63.00	$14,961.29

PERMITS ISSUED DURING 1908.

For placing building material on streets	669
Miscellaneous, removing trees, etc	34
United Electric Company, for house connections, etc	43
N. Y. & N. J. Telephone Co., erecting poles, etc	151
Newark Telephone Co., for conduits, etc	4
Public Service Corporation, for opening streets	41
For moving houses	10
Closing sidewalks, for wrecking buildings	15
To contractors for paving and grading streets, sewers, etc	69
Placing fences on sidewalks	12
Miscellaneous, cutting curbs, etc	50
Total	1,098

OBSTRUCTION DEPARTMENT.

Number of complaints investigated	635
Number of obstructions by owners	540
Number of obstructions removed by department	85
Complaints in police court	34
Fines imposed in police court	$14.60
Cost of removal of obstruction	$328.00

SEWERS AND DRAINAGE.
DISBURSEMENTS.

1908	Cleaning and Repairs			Pumping Station			Stable	Total
	Weekly Pay Rolls	Bills	Monthly Pay Rolls	Weekly Pay Rolls	Bills	Monthly Pay Rolls		
January	$ 2,931.64	$ 600.00	$ 316.66	$ 568.00	--------	$ 100.00	--------	$ 4,516.30
February	1,608.86	1,027.88	316.66	550.00	$ 749.64	100.00	--------	4,353.04
March	2,793.10	600.53	316.66	532.00	81.17	100.00	$ 435.00	4,858.46
April	2,956.09	--------	316.66	568.00	--------	110.00	--------	3,950.75
May	3,409.67	1,022.36	316.66	758.00	833.34	100.00	874.25	7,314.28
June	3,238.85	1,511.31	316.66	616.00	244.80	110.00	320.13	6,357.75
July	2,761.65	244.75	316.66	770.00	96.00	110.00	480.41	4,779.47
August	2,260.16	165.94	316.66	620.00	734.06	110.00	497.84	4,704.66
September	2,645.88	365.57	316.66	624.00	226.83	110.00	483.76	4,772.70
October	3,187.56	401.43	316.66	726.48	231.55	110.00	--------	4,973.68
November	2,524.83	759.79	316.66	624.00	749.51	110.00	--------	5,084.79
December	3,689.94	1,518.80	316.74	936.00	765.13	110.00	--------	7,336.61
Totals	$34,008.23	$8,218.36	$3,800.00	$7,892.48	$4,712.03	$1,280.00	$3,091.39	$63,002.49

Included in the above payments of bills are $1,400.00, the City's proportion of maintenance of joint outlet sewer.

CONDENSED REPORT, DEPARTMENT OF SEWERS AND DRAINAGE, 1908.

	No. of Loads	Cost
Basins cleaned (4,732)	8,184	$8,684.79
Sewers cleaned (204,500 feet)	1,684	6,190.05
Chambers cleaned, Pumping Station	2,513	584.50
Repairs at Pumping Station		12,25
Basins repaired		837.25
General repairs		210.75
Examining sewers and basins (detail men)		1,636.00
Ditches cleaned	74	935.75
Ditches repaired		17.50
Surveyors' help		1,218.62
Carpenter		774.50
Sumps cleaned	309	548.75
Man leveling City dumps		553.00
Service construction (E. S. Rankin's Depart.)		490.83
Inspecting brick sewers for repairs		387.75
Building manholes		124.15
Removing snow from basins		203.25
Painting carts		37.25
Draining pond, Fifteenth Ave. and So. Nineteenth St.		25.50
Building Basins		266.75
Leveling bank, Peddie Canal		136.75
Repairing and dredging Peddie canal		128.17
Building dock at Peddie canal		70.75
Repairing flushing tanks		6.50
Inspector on dock project		93.00
Building tide gates (Tenth Ward ditch)		15.00
Working for Street Department		23.50
Carting brick from Central R. R. of N. J.		14.00
Cutting Weeds, Peddie ditch		20.25
Working for Water Department		57.75
Repairs at Morris Avenue bath house		34.50
Repairing Dredger track		321.75
Miscellaneous		19.30
Building manholes		71.00

SEWER REPAIRS.

Peddie street	464.00
East Park street	15.25
Cherry street	7.50
Roseville avenue (285)	61.25

	Cost
Elwood avenue	13.00
West Kinney street	63.50
James street	25.20
Badger avenue	228.00
Morris avenue	25.00
Boyd street	40.75
McWhorter street	3.25
Emmett street	61.00
Hayes street	42.25
Baldwin street	7.00
Fourteenth avenue	6.75
Springfield avenue	7.00
South Orange avenue	78.50
Orange street	44.75
Thomas street	20.50
Montrose street	5.50
Fourth avenue	4.00
Court street	55.50
Plane street	83.25
Richelieu terrace	10.00
Rector street	191.25
Newton street	15.00
Frelinghuysen avenue	12.75
Central avenue	14.00
Sussex avenue	14.00
Elizabeth avenue	31.25
North Thirteenth street	7.00
Duryee street	7.00
So. Canal and River streets	8.15
Pacific street	12.50
Clinton street	10.50
Miscellaneous small sewers, viz: Barclay St., Arlington St., Summit St., 24 Green St., 16th Ave. and 12th St., Market and Alling Sts., 24 Mulberry St., State St., West Kinney St., 427 Broad St., Norfolk and Bank Sts.	50.50
Weekly salaries	15,402.70
Total weekly pay roll	$41,900.71

RECEIPTS.

SEWERS AND DRAINAGE.

Relaying basin connections	$ 59.80
Changing basin connections	68.60
Cleaning sumps	18.84
Erecting partition	9.00
Sale of old iron and hose	79.20
Sale of basin head	15.00
Sale of basin stone	1.50
Sale of horse	20.00
Sale of iron pipe	86.09
Building basin	125.00
Services of mason's helper	15.75
Sewer taps	14,660.00
Private sewer deposits	137.12
	$15,295.90

SEWERS AND DRAINAGE.

1908.

RECEIPTS AND APPROPRIATIONS.

Balance 1907	$ 334.36	
Tax Ordinance appropriation	23,000.00	
Supplemental appropriation	15,000.00	
Advance appropriation	2,000.00	
Additional appropriation	9,500.00	
Receipts 1908	15,295.90	
		$65,130.26
Total disbursements 1908		63,002.49
Balance		$ 2,127.77

DISTRIBUTION OF WEEKLY PAY ROLLS.

Sewers and Drainage.

Pumping Station

	Engineers	Fireman	Laborers	Foreman	Painter	Gate Tender	Inspectors of Taps	Carpenter	Laborers	Drivers	Detail Man	Hired Singles	Hired Teams	Mason	Surveyor Helpers	Helpers	Engineer Dredge	Inspector Dock Project	E. S. Rankin's Dept'	Total
January	$ 160.00	$ 288.00	$ 120.00	$ 240.00	$11.25	$ 60.00	$ 164.28	$ 72.00	$ 1,330.88	$ 269.25	$ 68.00	$3.15	------	$ 88.00	$ 84.00	------	------	------	$490.83	$ 3,499.64
February	160.00	270.00	120.00	240.00	11.25	60.00	164.28	72.00	746.76	79.50	68.00	------	------	88.00	64.00	------	------	------	15.07	2,158.86
March	160.00	252.00	120.00	240.00	------	60.00	164.28	72.00	1,669.60	288.00	68.00	------	------	88.00	64.00	------	------	------	79.13	3,325.10
April	160.00	288.00	120.00	240.00	------	60.00	164.28	72.00	1,805.06	323.75	68.00	------	------	66.00	64.00	------	------	------	93.00	3,524.00
May	216.00	384.00	158.00	300.00	------	75.00	205.35	90.00	2,069.07	352.50	85.00	------	$5.00	110.00	80.00	$12.50	------	------	24.25	4,167.67
June	176.00	312.00	128.00	240.00	------	60.00	164.28	72.00	1,974.15	363.00	68.00	------	------	88.00	64.00	------	$29.17	$75.00	41.25	3,854.85
July	220.00	390.00	160.00	300.00	------	75.00	205.35	90.00	1,516.80	265.50	85.00	------	------	110.00	80.00	------	------	18.00	16.00	3,531.65
August	176.00	316.00	128.00	240.00	------	60.00	164.28	45.00	1,247.13	277.75	68.00	------	------	78.00	64.00	------	------	------	16.00	2,880.16
September	176.00	320.00	128.00	240.00	------	60.00	164.28	54.00	1,588.85	313.75	68.00	------	------	88.00	64.00	5.00	------	------	------	3,269.88
October	210.46	367.16	148.86	279.99	------	70.43	191.65	84.00	1,928.99	356.50	79.33	------	------	104.00	74.67	------	------	------	18.00	3,914.04
November	176.00	320.00	128.00	240.00	------	60.00	164.28	51.00	1,500.30	289.25	68.00	------	------	88.00	64.00	------	------	------	------	3,148.83
December	264.00	480.00	192.00	300.00	------	90.00	246.42	87.00	2,139.77	420.25	102.00	------	------	112.00	96.00	------	------	------	36.50	4,625.94
Totals	$2,254.46	$3,987.16	$1,650.86	$3,159.99	$22.50	$790.43	$2,163.01	$861.00	$19,567.45	$3,600.00	$895.33	$3.15	$5.00	$1,108.00	$862.67	$17.50	$29.17	$93.00	$830.03	$41,900.71

REPAIRS TO ASPHALT STREETS

DISBURSEMENTS.

1908.	Asphalt Repairs and Resurfacing	Weekly Pay Rolls	Bills	Stable	Total
January		$ 397.67			$ 397.67
February		86.65	$ 259.50	$329.60	675.75
March		312.11			312.11
April		783.55	211.40	32.50	1,027.45
May	$ 3,556.24	1,049.56	318.08		4,923.88
June	3,025.23	810.04	698.45	297.72	4,831.44
July		880.31	140.79		1,021.10
August		761.31	893.23		1,654.54
September	5,240.72	746.57	157.48		6,144.77
October	8,333.87	876.01	891.79		10,101.67
November	7,781.42	685.15	238.51		8,705.08
December*	756.95 1,781.65	769.49	595.49		3,903.58
	$30,476.08	$8,158.42	$4,404.72	$659.82	$43,699.04

* Maintenance.

DEPARTMENT OF REPAIRS TO ASPHALT STREETS.

Location of Work	Maintenance Sq. Yards	Cuts Sq. Yards	Sq. Yards Charged	Total Sq. Yards
Astor Street.....	.98	3.87	1.29	6.14
Avon Place	.....	8.75	.....	8.75
Bathgate Place	1	.....	.....	1
Beaver Street	2.11	.....	10.68	12.79
Bank Street	165.19	.....	49.30	214.49
Barclay Street	27.06	.....	3.86	30.92
Burnett Street	.....	.....	9.32	9.32
Brunswick Street	.....	.....	2.87	2.87
Broad Street	177.15	69.52	17.08	263.75
Bruce Street	108.51	6.53	11.39	126.43
Camden Street	47.74	.....	18.31	66.05
Cedar Street	35.12	.....	.....	35.12
Chestnut Street	.....	1.50	.....	1.50
Clifton Avenue	17	.....	1.12	18.12
Clinton Avenue	460.97	.....	62.33	523.30
Clinton Street	186.15	61.67	69.01	316.83
Charlton Street	3.61	.....	.....	3.61
Court Street	4.94	.....	69.74	74.68
Crane Street	1.19	.....	12.37	13.56

Location of Work	Maintenance Sq. Yards	Cuts Sq. Yards	Sq. Yards Charged	Total Sq. Yards
Elm Street	4.54	11.49	.....	16.03
East Park Street	173.93	.....	38.71	212.64
Eagle Street	.....	6.14	6.43	12.57
Fairmount Avenue	4.10	.....	.....	4.10
Fulton Street	83.85	.....	.....	83.85
Fourth Street	22.87	.....	.....	22.87
Fourth Avenue	12	.....	.....	12
Franklin Street	.86	5.13	.....	5.99
Grant Street	158.47	.....	.....	158.47
Green Street	2.64	.....	.....	2.64
Garside Street	137.93	8.20	36.36	182.49
Gould Avenue	74.23	16.02	.....	90.25
Gouverneur Street	.....	.....	2.85	2.85
Hillside Avenue	.....	7.12	.....	7.12
Hillside Place	2.33	.....	.....	2.33
Harvey Street	18.81	.....	.....	18.81
Hunterdon Street	2.27	7.24	.....	9.51
Howard Street	.....	.....	51.71	51.71
Humboldt Street	2.44	.....	.....	2.44
Halsey Street	462.39	113.66	35.63	611.68
Jackson Street	4.35	.....	.....	4.35
James Street	4.03	.....	7.99	12.02
Jefferson Street	17.30	.....	128.62	145.92
John Street	34.44	.....	.....	34.44
Littleton Avenue	305.70	41.69	1.01	348.40
Lafayette Street	16.44	.....	2.77	19.21
Lincoln Street	2.33	.....	.....	2.33
Livingston Street	2.83	33.36	.....	36.19
Murray Street	7	.....	.....	7
Mt. Prospect Avenue	.....	17.67	.....	17.67
Milford Avenue	4.87	6.61	.....	11.48
Montgomery Street	8.22	.....	.....	8.22
North Canal Street	265.12	6.97	18.22	290.31
Newton Street	37.78	.....	14.23	52.01
North Sixth Street	.....	2.76	3.55	6.31
North Seventh Street	13.32	34.65	20.72	68.69
North Ninth Street	5.29	6.29	.....	11.58
New Street	597.19	.....	9.42	606.61
Ninth Avenue	3.34	.....	4.50	7.84
Orchard Street	7.14	.....	.....	7.14
Oriental Street	7.22	.....	.....	7.22
Park Place	512.96	10.24	37.66	560.86

Location of Work	Maintenance Sq. Yards	Cuts Sq. Yards	Sq. Yards Charged	Total Sq. Yards
Pennsylvania Avenue	11.81	5.08	3.77	20.66
Prince Street	31.31	.....	.....	31.31
Parker Street	250.04	.....	20.39	270.43
Ridgewood Avenue	23.28	.....	.....	23.28
South Street	.....	.....	8.69	8.69
South Sixth Street.....	32.36	15.12	31.50	78.98
South Seventh Street.....	12.12	22.60	9.23	43.95
South Eighth Street.....	18.54	19.28	25.13	62.95
South Tenth Street.....	4.39	.....	.....	4.39
South Eleventh Street....	15.75	.....	.....	15.75
Sherman Avenue	.....	6.41	7.75	14.16
Somerset Street	1.41	.....	.....	1.41
Summer Avenue.....	15.98	5.17	30.72	51.87
State Street	34.14	.....	2.81	36.95
Sixth Avenue	63.37	5.58	5.07	74.02
Scott Street	.....	4.78	.....	4.78
Summit Street	.....	.....	1.38	1.38
Stratford Place	7	.....	2.21	9.21
Sidney Place	12.16	.....	.....	12.16
Second Street	.....	4.50	7.54	12.04
Stone Street	11.82	.....	15.49	27.31
Tichenor Street	.....	7.47	.....	7.47
Thomas Street	.....	3.75	4.55	8.30
Thirteenth Avenue	12.62	13.58	7.99	34.19
Third Avenue	14.62	6.51	.....	21.13
Washington Street	224.07	.....	.....	224.07
Washington Place	119.14	.....	7.56	126.70
Washington Avenue	.....	.....	4	4
William Street	72.68	.....	332.05	404.73
Waverly Avenue	3.50	.....	.....	3.50
Wakeman Avenue	.....	.....	5.26	5.26
Wright Street	9.22	.....	.....	9.22
Walnut Street	9.16	.....	2.07	11.23
Total sq. yards.....	5,269.74	606.91	1,294.21	7,170.86

REPAIR OF ASPHALT STREETS.
BY CONTRACT.

1908.

	Sq. Yards	Cubic Yards Concrete
Sherman Avenue	175.50	....
Barclay Street	357.11	4.21
Monmouth Street	58.12	....
Astor Street	86.72	....
Murray Street	80.78	....
Wright Street	130.38	1.02
Waverly Avenue	108.61	2.17
Elizabeth Avenue	218.32	....
Emmet Street	13.51	....
Camp Street	38.90	....
Pennsylvania Avenue	504.22	3.50
Lincoln Park	71.22	....
Thomas Street	183.70	....
South Street	87.48	.93
Walnut Street	3.43	....
Chestnut Street	5.10	....
Somerset Street	192.60	.16
Orchard Street	195.11	....
Rose Street	25.78	....
Court Street	44.22	....
Tichenor Street	55.15	....
Pennington Street	47.89	....
Summer Avenue	2,685.00	15.94
Gouverneur Street	146.00	.22
Oriental Street	45.60	....
Wakeman Avenue	197.80	.84
Nursery Street	192.10	....
Harvey Street	131.48	1.56
Broad Street	1,191.00	3.17
Lafayette Street	431.00	6.32
Milford Avenue	9.50	1.57
Clinton Avenue	155.00	....
Third Street, resurfacing	5,681.00	18.11
Third Avenue, resurfacing	2,168.00	....
South Seventh Street, resurfacing	3,334.00	10.84
Mt. Prospect Avenue, resurfacing	3,275.00	9.00
	22,326.33	79.56

22,326.33	square yards of Asphalt at $1.23	$27,461.38
79.56	cubic yards of Concrete at $5.00	397.80
12	cubic yards of Binder at $6.00	72.00
9	lineal feet Header Curb at $0.70	6.30
	Total	$27,937.48

In connection with the foregoing, there has also been paid on account of the maintenance of asphalt pavements, according to the terms of the contracts for paving certain streets, the following amounts, which were charged to repairs to asphalt streets:

John F. Shanley	$ 756.95
Metropolitan Paving Co	1,781.65
	$2,538.60

SUMMARY.

Weekly Pay Roll and Supplies	$13,222.96
Asphalt repairs and resurfacing, as per contract with the Standard Bitulithic Co	27,937.48
Maintenance of asphalt pavements, as per five-year term guarantee on outstanding contracts	2,538.60
Total	$43,699.04

REPAIRS TO ASPHALT STREETS.
1908.

RECEIPTS AND APPROPRIATION.

Balance 1907	$ 7,191.11	
Tax Ordinance Appropriation	35,000.00	
Receipts 1908	5,770.60	
		$47,961.71
Total disbursements 1908		43,699.04
Balance		$ 4,262.67

DISTRIBUTION OF WEEKLY PAY ROLLS.

REPAIRS TO ASPHALT STREETS.

MONTH	Foreman	Laborers	Drivers	Horse and Wagon	Pavers and Rammers	Inspectors	Helpers	Total
January	$ 80.00	$ 220.17	$ 97.50					$ 397.67
February	80.00	1.40	3.50	$ 1.75				86.65
March	80.00	139.76	6.25	51.50		$ 21.00	$13.60	312.11
April	80.00	470.40		191.15		42.00		783.55
May	100.00	635.76		291.45	$ 6.85	115.50		1,049.56
June	80.00	528.04		198.50		3.50		810.04
July	100.00	572.16		204.65		3.50		880.31
August	80.00	476.21	2.25	171.35		31.50		761.31
September	80.00	425.52	2.00	155.40	24.15	59.50		746.57
October	93.33	553.88		200.80	28.00			876.01
November	80.00	393.80		148.35	63.00			685.15
December	120.00	467.04		169.45	6.00	7.00		769.49
Totals	$1,053.33	$4,784.14	$111.50	$1,784.85	$128.00	$283.50	$13.60	$8,158.42

PUBLIC BATHS

DISBURSEMENTS.

1908	Weekly Pay Rolls	Bills	Total
January	$ 704.00	.....	$ 704.00
February	704.00	$ 647.51	1,351.51
March	717.50	161.86	879.36
April	719.50	2,501.37	3,220.87
May	921.00	392.13	1,313.13
June	742.00	251.21	993.21
July	1,064.50	263.64	1,328.14
August	872.00	565.24	1,437.24
September	918.85	782.82	1,701.67
October	1,020.50	580.74	1,601.24
November	862.00	227.22	1,089.22
December	1,330.50	848.42	2,178.92
Totals	$10,576.35	$ 7,222.16	$17,798.51

ATTENDANCE.

1908	Summer Ave. Males	Summer Ave. Females	Walnut St. Males	Walnut St. Females	Morris Ave. Males	Morris Ave. Females
January	....	....	149	25	562	12
February	....	....	52	6	535	....
March	....	....	201	15	1,165	9
April	....	....	1,478	83	1,282	31
May	....	....	2,545	202	3,320	70
June	....	....	5,870	460	6,215	372
July	10,465	2,271	12,790	600	10,274	1,148
August	7,189	1,511	6,713	455	7,978	679
September	3,408	613	1,857	160	3,694	256
October	1,265	120	615	71	1,211	77
November	844	36	342	47	1,001	30
December	446	22	133	32	745	....
Totals	23,617	4,573	32,745	2,156	37,982	2,684

Total Males	94,344	
Females	9,413	
		103,757

RECEIPTS FROM USE OF TOWELS, SUITS, DRESSING ROOMS AND SHOWER BATHS.

Summer Avenue	$ 309.15
Walnut Street	353.80
Morris Avenue	526.60
Total	$1,189.55

The bath houses were open the whole year, with the exception of Summer Avenue, which was closed for repairs from January to July.

RECEIPTS AND APPROPRIATION.

1908.

Balance 1907	$ 2,320.21	
Tax Ordinance Appropriation	15,000.00	
Receipts 1908	1,189.55	
		$18,509.76
Total disbursements 1908		17,798.51
Balance		$711.25

DISTRIBUTION OF WEEKLY PAY ROLLS.

PUBLIC BATHS

MONTH	Superintendents	Assistant Supts.	Engineers	Matrons	Carpenter	Extra Laborers	Helper	Total
January	$ 228.00	$ 190.00	$ 190.00	$ 48.00	--------	$ 48.00	------	$ 704.00
February	228.00	190.00	190.00	48.00	--------	48.00	------	704.00
March	225.00	172.50	187.50	48.00	$36.50	48.00	------	717.50
April	216.00	180.00	227.50	48.00	--------	48.00	------	719.50
May	270.00	225.00	300.00	60.00	6.00	60.00	------	921.00
June	216.00	180.00	240.00	48.00	6.00	48.00	$ 4.00	742.00
July	309.00	257.50	340.00	66.00	15.00	70.00	7.00	1,064.50
August	252.00	210.00	280.00	64.00	6.00	60.00	------	872.00
September	252.00	210.00	280.00	64.00	15.00	97.85	------	918.85
October	297.00	247.50	330.00	80.00	--------	66.00	------	1,020.50
November	252.00	210.00	280.00	64.00	--------	56.00	Mason	862.00
December	378.00	315.00	420.00	96.00	--------	101.50	20.00	1,330.50
Totals	$3,123.00	$2,587.50	$3,265.00	$734.00	$84.50	$751.35	$31.00	$10,576.35

SIDEWALKS

DISBURSEMENTS.

1908	Monthly Pay Rolls	Bills	Weekly Pay Rolls	Total
January	$ 175.00	.....	$135.00	$ 310.00
February	175.00	$ 248.13	.....	423.13
March	175.00	3.70	.....	178.70
April	175.00	266.89	.....	441.89
May	175.00	178.16	.....	353.16
June	175.00	576.66	.....	751.66
July	175.00	1,169.83	.....	1,344.83
August	175.00	3.25	30.00	208.25
September	175.00	.....	.....	175.00
October	175.00	236.71	40.00	451.71
November	175.00	328.69	60.00	563.69
December	175.00	1,170.52	90.00	1,435.52
Totals	$2,100.00	$4,182.54	$355.00	$6,637.54

REPORT OF SIDEWALKS FOR 1908.

	Square Feet
New walks laid by property owners	44,173
Walks relaid by property owners	756,327
Concrete walks laid by property owners	512,379
New walks laid by order of the Board	5,949
Walks relaid by order of the Board	20,397
New walks laid by ordinance, as per contract	380,523
Concrete walks laid by ordinance, as per contract	672
Total	1,720,420
Curb reset by property owners	263 lineal feet
Number of permits granted	5,769

RECEIPTS AND APPROPRIATION.

Balance 1907	$ 254.34	
Tax Ordinance Appropriation	1,000.00	
Advance Appropriation	1,000.00	
Receipts 1908	4,926.52	
		$7,180.86
Total disbursements 1908		6,637.54
Balance		$ 543.32

DISTRIBUTION OF WEEKLY PAY ROLLS.
SIDEWALKS.

1908.	Inspector	Total
January	$135.00	$135.00
August	30.00	30.00
October	40.00	40.00
November	60.00	60.00
December	90.00	90.00
Totals	$355.00	$355.00

SCAVENGER

1908.	Weekly Pay Rolls	Bills	Total
January	$ 821.73	.....	$ 821.73
February	905.20	$ 10,928.16	11,833.36
March	838.88	10,764.66	11,603.54
April	905.20	10,778.71	11,683.91
May	1,138.40	10,759.66	11,898.06
June	914.40	10,764.66	11,679.06
July	1,099.75	21,506.32	22,606.07
August	897.10	16,764.66	17,661.76
September	1,159.40	14,847.56	16,006.96
October	1,304.86	14,845.36	16,150.22
November	983.60	14,766.66	15,750.26
December	1,480.40	14,787.74	16,268.14
Totals	$12,448.92	$151,514.15	$163,963.07

Included in the above disbursements are payments, amounting to $150,900.00, to L. J. Buckley & Company, contractors for the removal of ashes, garbage and paper.

REPORT OF SCAVENGER DEPARTMENT FROM JANUARY 1 to DECEMBER 31, 1908.

(House line regulation in force since September 15, 1908.)

1908.	Number of Complaints Received and Investigated	Number of Complaints through neglect of Contractor	Number of Complaints no Cause for Same
January	83	27	56
February	102	47	55
March	93	54	39
April	111	62	49
May	57	18	39
June	43	22	21
July	47	33	14
August	54	36	18
September	41	33	8
October	37	21	16
November	34	22	12
December	29	17	12

Number of arrests for violation of ordinances..... 30

Number of cubic yards of ashes and rubbish, the number of tons of garbage and the number of tons of paper collected during the year 1908.

	Ashes and Rubbish Cubic Yards	Garbage Tons	Paper Pounds
January	49,275	1,210	39,670
February	48,790	1,104	39,995
March	49,110	1,206	45,008
April	46,201	1,297	51,710
May	41,006	1,404	56,063
June	37,190	2,317	48,791
July	33,809	2,641	46,982
August	31,760	3,102	48,765
September	35,743	2,675	52,999
October	46,309	2,360	49,873
November	49,382	1,410	41,374
December	53,642	1,105	40,008
Totals	522,217	21,831	561,238 or 280¾ tons.

DISTRIBUTION OF WEEKLY PAY ROLL.

SCAVENGER.

1908. INSPECTOR'S PAY ROLL.

January	$821.73
February	905.20
March	838.88
April	905.20
May	1,138.40
June	914.40
July	1,099.75
August	897.10
September	1,159.40
October	1,304.86
November	983.60
December	1,480.40
Total	$12,448.92

SCAVENGER.

1908. APPROPRIATIONS.

Tax Ordinance Appropriation	$104,000.00	
Supplemental Appropriation	30,000,00	
Advance Appropriation	11,000,00	
Additional Appropriation	19,000.00	
		$164,000.00
Total disbursements, 1908		163,963.07
Balance		$36.93

CROSS WALKS

1908.	Weekly Pay Rolls	Bills	Stable	Total
January	$ 26.30	.....	.....	$ 26.30
February	.....	$ 25.00	.....	25.00
March	113.20	25.00	$ 32.50	170.70
April	400.70	32.25	150.00	582.95
May	328.25	3.33	.....	331.58
June	293.40	21.20	178.13	492.73
July	394.15	12.10	.....	406.25
August	237.20	5.00	.....	242.20
September	260.40	56.00	.....	316.40
October	365.05	128.75	.....	493.80
November	172.95	420.78	.....	593.73
December	109.30	176.60	.....	285.90
Total	$2,700.90	$906.01	$360.63	$3,967.54

DEPARTMENT OF CROSSWALKS.

1908.	Number of Walks Relaid	New Single Runs	New Double Runs	Cost
January	.....	.....	.....	.....
February	.....	.....	.....	.....
March	16	.....	.....	$113.20
April	28	3	1	400.70
May	9	.....	4	211.60
June	31	.....	.....	293.40
July	58	2	.....	394.15
August	43	.....	.....	237.20
September	23	13	.....	260.40
October	34	2	.....	365.05

1908	Number of Walks Relaid	New Single Runs	New Double Runs	Cost
November	21	13	3	172.95
December	11	7		109.30
Totals	274	40	8	$2,557.95
January, filling holes				26.30
May, setting curb, So. 8th street				116.65
Total weekly pay rolls				$2,700.90

DISTRIBUTION OF WEEKLY PAY ROLLS.

CROSS WALKS.

MONTH	Pavers	Drivers	Rammers	Helpers	Sundries	Trimm'rs	Total
January	$ 14.80	$ 6.00	$ 5.50				$ 26.30
February							
March	79.20	18.00	16.00				113.20
April	222.10	47.75	123.45	$ 7.40			400.70
May	182.40	37.75	63.50	28.20		$ 16.40	328.25
June	93.20	50.75	58.25		$7.20	84.00	293.40
July	132.80	59.50	76.25			125.60	394.15
August	151.20	50.75	35.25				237.20
September	178.40	48.00	34.00				260.40
October	228.80	64.75	71.50				365.05
November	121.20	43.25	8.50				172.95
December	66.80	42.50					109.30
Totals	$1,470.90	$469.00	$492.20	$35.60	$7.20	$226.00	$2,700.90

CROSS WALKS.

RECEIPTS AND APPROPRIATIONS—1908

Balance, 1907	$19.39	
Tax ordinance appropriation	4,000.00	
Receipts, 1908	35.15	
Total		$4,054.54
Total disbursements, 1908		3,967.54
Balance		$87.00

BRIDGES

DISBURSEMENTS.

1908.	Weekly Pay Rolls	Bills	Total
January	$67.90	.....	$67.90
February	.....	$130.89	130.89
March	.....	.....	.....
April	33.00	.....	33.00
May	74.75	46.64	121.39
June	34.05	157.36	191.41
July	62.25	392.99	455.24
August	69.00	4.00	73.00
September	121.00	173.13	294.13
October	6.60	191.41	198.01
November	3.00	71.53	74.53
December	160.95	263.55	424.50
Totals	$632.50	$1,431.50	$2,064.00

DISTRIBUTION OF WEEKLY PAY ROLLS.

BRIDGES.

MONTH	Carp'ter	Laborer	Painter	Horse and Wagon	Helper	Watchman	Sundries	Total
January	$ 21.00	$ 39.00	.....	$ 4.90	.....	.....	.....	$ 67.90
February	.....	.....	.....	.....	.....	.....	.....	.....
March	.....	.....	.....	.....	.....	.....	.....	.....
April	12.00	14.25	.....	1.75	.....	.....	5.00	33.00
May	12.00	52.00	.....	.....	8.25	2.50	.....	74.75
June	9.00	20.00	4.00	1.05	.....	.....	.....	34.05
July	18.00	31.75	10.00	.....	.....	2.50	.....	62.25
August	15.00	34.50	19.50	.....	.....	.....	.....	69.00
September	30.00	28.00	63.00	.....	.....	.....	.....	121.00
October	3.00	2.20	.....	1.40	.....	.....	.....	6.60
November	3.00	.....	.....	.....	.....	.....	.....	3.00
December	33.00	72.05	37.30	2.10	.....	.....	16.50	160.95
Total	$159.00	$293.75	$133.80	$11.20	$8.25	$5.00	$21.50	$632.50

RECEIPTS AND APPROPRIATIONS—1908.

Balance, 1907	$513.01	
Tax ordinance appropriation	1,500.00	
Additional appropriation	200.00	
		$2,213.01
Total disbursements, 1908		2,064.00
Balance		$149.01

WHARVES

1908.	Bills	Total
November	$240.00	$240.00
December	80.00	80.00
Totals	$320.00	$320.00

RECEIPTS—1908.

Balance, 1907		$4,191.46	
Rents of City docks	$870.00		
Wharfage	180.00		
		1,050.00	
			$5,241.46
Total disbursements, 1908			320.00
Balance			$4,921.46

HOUSE SEWER CONNECTIONS

DISBURSEMENTS.

1908.	Weekly Pay Rolls	Bills	Total
January	$42.00		$42.00
February	335.14	$435.74	770.88
March	934.90	364.98	1,299.88
April	2,206.04	1,210.42	3,416.46
May	3,176.72	1,091.05	4,267.77
June	2,087.80	1,280.41	3,368.21
July	2,178.40	1,106.71	3,285.11
August	1,135.40	830.87	1,966.27
September	1,202.55	416.67	1,619.22
October	1,169.29	900.77	2,570.06
November	1,091.40	889.16	1,980.56
December	1,519.68	1,293.84	2,813.52
Totals	$17,579.32	$9,820.62	$27,399.94

RECEIPTS AND APPROPRIATIONS—1908.

Balance, 1907	$1,075.52	
Tax ordinance appropriation	3,000.00	
Advance appropriation	5,000.00	
Total receipts, 1908	28,544.62	
		$37,620.14
Total disbursements, 1908		27,399.94
Balance		$10,220.20

RECAPITULATION OF WEEKLY PAY ROLLS.

1908	Street Cleaning	Street Repairs	City Stables	Total Streets & Highways	Sewers and Drainage	Cross-walks	Public Baths	Rep'rs to Asphalt Streets	Side-walks	Bridges	Scaven-ger	House Sewer C'nnec'ns	Total
January	$ 20,584.45	$ 1,327.80	$ 1,138.20	$ 23,050.45	$ 3,499.64	$ 26.30	$ 704.00	$ 397.67	$135.00	$ 67.90	$ 821.73	$ 42.00	$ 28,744.69
February	16,288.75	491.70	1,079.55	17,860.00	2,158.86	.....	704.00	86.65	.....	.....	905.20	335.14	22,049.85
March	24,965.24	1,424.04	1,156.45	27,545.73	3,325.10	113.20	717.50	312.11	.....	.....	838.88	934.90	33,787.42
April	29,014.65	4,368.25	1,188.60	34,571.50	3,324.09	400.70	719.50	783.55	.....	33.00	905.20	2,206.04	43,143.58
May	19,723.05	2,875.80	1,386.85	23,985.70	4,167.67	328.25	921.00	1,049.56	.....	74.75	1,138.40	3,176.72	34,842.05
June	22,439.45	2,952.16	1,136.60	26,528.21	3,854.85	293.40	742.00	810.04	.....	34.05	914.40	2,087.80	35,264.75
July	19,674.35	2,404.10	1,354.70	23,433.15	3,531.65	394.15	1,064.50	880.31	.....	62.25	1,099.75	2,178.40	32,644.16
August	16,134.16	1,646.58	1,090.40	18,871.14	2,880.16	237.20	872.00	761.31	30.00	69.00	897.10	1,135.40	25,753.31
September	16,746.55	1,558.44	1,019.20	19,324.19	3,269.88	260.40	918.85	746.57	.....	121.00	1,159.40	1,202.55	27,002.84
October	19,999.97	2,131.22	1,266.44	23,397.63	3,914.04	365.05	1,020.50	876.01	40.00	6.60	1,304.86	1,669.20	32,503.98
November	14,893.30	1,424.76	1,192.80	17,510.86	3,148.83	172.95	862.00	685.15	60.00	3.00	983.60	1,091.40	24,517.79
December	17,726.61	1,664.76	1,951.50	21,342.87	4,625.94	109.30	1,310.50	769.49	90.00	160.95	1,480.40	1,519.68	31,429.13
Totals	$238,190.53	$24,269.61	$14,961.29	$277,421.43	$41,900.71	$2,700.90	$10,576.35	$8,158.42	$355.00	$632.50	$12,448.92	$17,579.32	$371,773.56

REPORT OF ELECTRICAL MACHINIST AND TROLLEY INSPECTOR

STREET RAILWAYS.

Flat wheels removed		314
Defective fenders removed		218
Defective cars removed		50
		582
Closed cars in use, 1907	472	
Open cars in use, 1907	190	
		662
Closed cars in use, 1908	594	
Open cars in use, 1908	120	
		714
Increase of service in cars		52

PUBLIC LIGHTING.

DISBURSEMENTS.

1908.	Stable	Monthly Pay Rolls	Bills	Total
January		$510.66		$510.66
February		492.66	$15,475.69	15,968.35
March		510.66	27,006.46	27,517.12
April	$290.00	501.66	15,706.28	16,497.94
May		510.66	15,716.27	16,226.93
June		501.66	24,580.67	25,082.33
July		510.66	15,753.72	16,264.38
August		510.66	15,821.07	16,331.73
September		501.66	15,716.45	16,218.11
October		510.66	21,899.45	22,410.11
November		501.66	14,920.25	15,421.91
December		510.74	39,671.83	40,182.57
Totals	$290.00	$6,074.00	$222,268.14	$228,632.14

DEPARTMENT OF PUBLIC LIGHTING

In daily use on the streets, in the parks and playgrounds of the City there are 2,510 arcs, 2,032 gas lamps, 3 fire department signal lamps, 2 gas Welsbachs and 184 incandescents, a total of 4,731 lamps, an increase for the year of 108 arcs, 1 gas lamp, 2 fire department signal lamps, 5 incandescents and 2 gas Welsbachs. All lamps burn all night and every night on a schedule of 4,000 hours per year. The United Electric Company of New Jersey is the contractor for electric lighting and the Public Service Corporation of New Jersey for gas lighting.

ELECTRIC LIGHTING.

Arc lamps in use Dec. 31, 1907		2,402
Arc lamps installed during year	108	
Arc lamps in use Dec. 31, 1908		2,510
Increase		108

Outages during the year, 11,737 lamp hours, for which a pro rata deduction was made.

Arc lamps are of nominal 2,000 candle power.

Contract requirements, 450 volts of electrical energy at lamp terminal.

The lamps in use are the General Electric alternating current lamps, run in series.

The cost per lamp per year has been $75.00 to Sept. 1, 1908, when, under a new four-year contract, the cost was reduced to $70.00. The new contract will expire Sept. 1, 1912.

The United Electric Company of New Jersey owns and maintains all lamps, lines, and other consrtuction, the city paying the light only.

Conduits have been laid in William street, from Broad to Washington street, and on Nutria street, north to William street.

One hundred and ninety-four arcs are connected with the underground service.

ELECTRIC INCANDESCENTS.

Incandescents in use Dec. 31, 1907		179
" added during the year	17	
" discontinued during year	12	
" in use Dec. 31, 1908		184
Increase		5

Electrical incandescents are of 32-candle power and cost $15.00 per lamp per year. Outages during the year, 116 lamp hours, for which a pro rata deduction was made.

GAS LIGHTING.

Gas lamps, open flame, in use Dec. 31, 1907		2,032
" " " " lighted during year	72	
" " " " relighted during year	4	
" " fire signals lighted	2	
" " Welsbachs lighted	2	
" " discontinued, open flame, during year	75	
" " in use Dec. 31, 1908		2,037
Increase		5

Outages during the year, 13,438 lamp hours, for which a pro rata deduction was made.

The cost of open flame gas lamps has been $19.00 per lamp per year to March 1, 1908, when, under a new five-year contract, the cost was reduced to $18.00.

The candle power was 21 candles during the year.

Contract requirements, minimum old contract, 14 candles; new contract, 19 candles.

The contractor under the old contract furnished the gas, burners, cleaned, lighted and extinguished the lamps. The City furnished the posts and lamps, glazed and painted the lamps, and made all repairs and connections with gas mains. Under the new contract the contractor will furnish the gas and burners, clean, light and extinguish the lamps, make all connections with gas mains, repair and supply all riser pipes, keep the flow of gas unobstructed and paint all lamps during the first year of contract. The City will furnish the lamp posts in position, also the lamps, glaze same and replace pavement.

Attention was given to 8,489 lamps, 6,200 lights of glass having been put in 4,118 lamps, 596 globes and 521 lever street lamp cocks have been placed on lamps. 602 have been painted, 204 lanterns repaired, 76 posts erected, 13 re-located, 24 reset, 126 unused lamp posts taken up and removed and 3 found broken.

Gas mains for street lighting have been laid during the year in Buffington avenue, from Fabyan place to City line; Willoughby street, from St. James street to Bragaw avenue; Oraton street, from Chester avenue to Hinsdale place; Meade street from Silver street to Lenox avenue; West End avenue, from Laurel place to Orange avenue; Brookdale avenue, from Ocean avenue to Orange avenue;

Lenox avenue, from Meade street to Sanford avenue; Stuyvesant avenue, from Lindsley avenue to Ocean avenue; Chestnut street, from Tyler street to Elm road; Schley street, from Bragaw avenue to Lyons avenue.

GAS WELSBACHS.

Five hundred gas Welsbachs will be installed in residential sections to replace open flame gas lamps and arcs between street intersections. The new system adopted is to place arcs on all street intersections and gas Welsbachs between the arcs where needed. Welsbachs are of 60 candle power and cost $26.50 per lamp per year. The City places lamp posts and riser pipes in position and replaces pavement. The contractor makes connections with gas mains, furnishes the supply of gas, lamps, burners and mantels, lights and extinguishes the lamps, cleans the globes and keeps the lamps in thorough repair.

Candle power of the gas during the year: Highest, 23.8; lowest, 18.8; average, 21.247. Pressure of gas during the year: Highest, 3.80; lowest, 1.90; average, 2.755. Number of gas meters tested during the year, 2,652; found incorrect 27.

The following table shows the total number of lamps in use each year, as per annual report since 1900:

	Electric Lamps		Gas Lamps				
	Electric Arcs	Incandescents	Open Flame	Welsbachs	Fire Signals	Total	Annual Increase
Dec. 31, 1900	1,725	12	2,009			3,746	
1901	1,794	9	2,074			3,877	131
1902	1,859	60	2,180			4,099	222
1903	1,973	61	2,155			4,189	90
1904	2,038	87	2,139			4,264	75
1905	2,154	170	2,131			4,455	191
1906	2,235	182	2,103			4,520	65
1907	2,402	179	2,031	2	3	4,613	93
1908	2,510	184	2,032	2	3	4,731	118

RECEIPTS AND APPROPRIATIONS—1908.

Balance, 1907	$936.31	
Tax ordinance appropriation	175,000.00	
Supplemental appropriation	50,000.00	
Additional appropriation	1,000.00	
Transfer from contingent fund	1,410.83	
Receipts, 1908	285.00	
		$228,632.14
Total disbursements, 1908		$228,632.14

RECAPITULATION OF CASH RECEIPTS, 1908.

Streets and highways	$12,186.17
Sewers and drainage	15,295.90
Crosswalks	35.15
Public baths	1,189.55
Wharves	1,050.00
Public lighting	285.00
Repairs to asphalt streets	5,770.60
House sewer connections	28,544.62
Sidewalks	4,926.52
Total	$69,283.51

DEPARTMENT OF POLES AND WIRES

POLES, CABLE CONDUCTORS AND OPEN WIRES, CONDUITS, DUCTS AND MANHOLES WITHIN THE CITY LIMITS.

PUBLIC SERVICE RAILWAY COMPANY.

	Wood	Iron
Number of poles, Dec. 31, 1907	30	4,689

	Wood	Iron
Number of poles erected during year	7	7
" " " removed during year	2	10
" " " December 31, 1908	35	4,686

Number of miles of cable,, aerial, December 31, 1908—

1,000,000 C. M.	.24 miles	
750,000 C. M.	.12 "	
500,000 C. M.	70.403 "	
211,600 C. M.	36.956 "	
		107.719

Number of miles of cable in subways, December 31, 1908—

1,000,000 C. M.	18.043 miles	
750,000 C. M.	1.872 "	
500,000 C. M.	8,077 "	
2.03 Conductor	22.22 "	
1,000,000 bare copper	10.141 "	
		49.353

Number of miles of wire—aerial—December 31, 1908—		
1.0 and 2.0 trolley	99,499	miles
Number of miles of conduits, Dec. 31, 1907	10.84	"
Single duct	145.765	"
Conduits, Dec. 31, 1908	11.251	"
Single duct	149.015	"
Number of manholes, Dec. 31, 1907		174
" " " Dec. 31, 1908		178

PUBLIC SERVICE CORPORATION ELECTRICAL DEPARTMENT.

	Wood	
Number of poles, Dec. 31, 1907	6,475	
Erected during year	172	
Replaced	231	
Number of poles, Dec. 31, 1908		6,647
Number of miles of cable in subways		133.6
" " " " conductors, aerial		705.7
" " " " conductors in subways		219.8
" " " " conduits, Dec. 31, 1907		8.5
" " " " single ducts, Dec. 31, 1907		113.3
" " " " conduits, Dec. 31, 1908		9.1
" " " " single ducts, Dec. 31, 1908		118.8
Number of manholes, Dec. 31, 1907		429
" " " Dec. 31, 1908		454

NEW YORK AND NEW JERSEY TELEPHONE COMPANY.

	Wood	Iron
Number of poles Dec. 31, 1907	3,969	1
Erected during year	271	
Removed	14	
Replaced	29	
Number of poles, Dec. 31, 1908	4,226	1
Number of miles of cable, aerial, Dec. 31, 1908		21.12
" " " " " in subways		133.23
" " " " " conductors, aerial		2,881.39
" " " " " in subways		54,422.97
" " " " " conduits, Dec. 31, 1907		62.57
" " " " " single ducts		352.48
" " " " " conduits, Dec. 31, 1908		65.28
" " " " " single ducts		357.53
Number of manholes, Dec. 31, 1907		695
" " " " " 1908		738

NEWARK TELEPHONE COMPANY.

Number of poles, Dec. 31, 1907, wood	449
Removed during year	3
Replaced	17
Number of poles, Dec. 31, 1908	446
Number of miles of cable, aerial, Dec. 31, 1908	2
In subways, Dec. 31, 1908	19.25
Conductors, aerial	1,731
In subways	2,352
Conduits, Dec. 31, 1907	9.22
Single ducts, Dec. 31, 1907	44.64
Conduits, Dec. 31, 1908	9.29
Single ducts	45.19
Number of manholes, Dec. 31, 1907	86
" " " Dec. 31, 1908	87

WESTERN UNION TELEGRAPH COMPANY.

Number of poles, Dec. 31, 1907, wood	613
Erected during year	1
Number of poles, Dec. 31, 1908	614
Number of miles of cable, aerial. Dec. 31, 1908	13.34
In subway	1.86
Conductors, aerial	309.40
In subways	134.21

This company has no conduits.

NORTHEASTERN TELEPHONE AND TELEGRAPH CO.

Number of poles, Dec. 31, 1908, wood	251
Number of miles of cable in subway, Dec. 31, 1908	3.25
" " " " conductors, aerial, Dec. 31, 1908	304.4
" " " " conductors in subways	643.50

POSTAL TELEGRAPH CABLE COMPANY.

This company has no poles; uses poles of Public Service Corporation of N. J., and ducts of N. Y. & N. J. Telephone Co.

Number of miles of conductors, aerial, Dec. 31, 1908	.105
In subways	2.53
Conductors, aerial	3
In subways	110.68

NEWARK DISTRICT TELEGRAPH COMPANY.

Number of poles, Dec. 31, 1907, wood	4
Erected during year, wood	1
Number of poles, Dec. 31, 1908	5
Number of miles of cable, aerial, Dec. 31, 1908	.75
Cable in subways	2.25
Conductors, aerial	8
In subways	221

Company leases ducts from Telephone Companies.

POLICE DEPARTMENT SIGNAL SERVICE.

Maintained by N. Y. & N. J. Telephone Co.

Number of poles, Dec. 31, 1908, wood	117
Number of miles of cable, aerial, Dec. 31, 1908	.5
In subways, Dec. 31, 1908	9.96
Number of miles of conductors, aerial	381.64
" " " in subways	104.94

FIRE DEPARTMENT SIGNAL SERVICE.

Number of poles, Dec. 31, 1907, wood		660
Erected during year	4	
Removed during year	15	
Number of poles Dec. 31, 1908		649
Number of miles of cable, aerial		.189
In subways		20.26
Number of miles of conductors, aerial		152.80
In subways		196 77

Respectfully submitted,

C. M. SHIPMAN,

General Superintendent of Work.

RECAPITULATION.

	POLES										Cable, Miles		Conductors and Open Wire, Miles		Conduits Miles		Ducts, Miles		Manholes	
	Wood		Iron		Erected		Rem'vd		R'plac'd											
	Dec. 31, 1907	Dec. 31, 1908	Dec. 31, 1907	Dec. 31, 1908	Wood	Iron	Wood	Iron	Wood	Iron	Aerial	In Subways	Aerial	In Subways	Dec. 31, 1907	Dec. 31, 1908	Dec. 31, 1907	Dec. 31, 1908	Dec. 31, 1907	Dec. 31, 1908
Public Service Corp. of N. J.—Street Railway	30	35	4,680	4,686	7	7	2	10	----	----	47.719	49.353	99.499	----	10.84	11.251	145.765	149.015	174	178
Public Service Corp. of N. J.—Electrical Dept.	6,475	6,647	----	----	172	----	----	----	231	----	----	133.6	705.7	219.8	8.5	9.1	113.3	118.8	429	454
New York and New Jersey Telephone Company	3,969	4,226	1	1	271	----	14	----	29	----	21.12	133.23	2,881.39	54,422.97	62.57	65.28	352.48	357.53	695	738
Newark Telephone Company	449	446	----	----	----	----	3	----	17	----	2.	19.25	1,731.	2,352.	9.22	9.29	44.64	45.19	86	87
Western Union Telegraph Company	613	614	----	----	1	----	----	----	----	----	13.34	1.86	309.40	134.21	----	----	----	----	----	----
Northeastern Telephone and Telegraph Co.	251	251	----	----	----	----	----	----	----	----	----	3.25	304.4	643.50	----	----	----	----	----	----
Postal Telegraph Cable Company	----	----	----	----	----	----	----	----	----	----	.105	2.53	3.	110.68	----	----	----	----	----	----
Newark District Telegraph Company	4	5	----	----	1	----	----	----	----	----	.75	2.25	8.	221.	----	----	----	----	----	----
Police Department Signal Service	117	117	----	----	----	----	----	----	----	----	.5	9.96	331.64	104.94	----	----	----	----	----	----
Fire Department Signal Service	660	649	----	----	4	----	15	----	----	----	.189	20.26	152.80	196.77	----	----	----	----	----	----
Total	12,568	12,900	4,690	4,687	356	7	31	10	277	----	85.723	375.543	6,576.829	58,405.87	91.13	94.921	656.185	670.535	1,384	1,457

Respectfully submitted,

C. M. SHIPMAN,

Gen'l Supt. of Works.

ANNUAL REPORT

OF THE

Engineer and Superintendent of the Department of Water

ANNUAL REPORT

OF THE

Engineer and Superintendent of the Department of Water

Mr. Morris R. Sherrerd, Chief Engineer, Board of Street and Water Commissioners of the City of Newark, New Jersey:

DEAR SIR:—Herewith is submitted the report of the condition and operation of the work of the Department of Water for the year ended December 31st, 1908.

WATERSHED.

Considerable attention was given during the year 1908 to forestry in the watershed, and in addition to the regular routine work about 60,000 young trees were planted, principally at Oak Ridge and Charlotteburg. A nursery to raise trees from seed was also started, which will be increased this coming year. It is the policy of the department to reforest all available land as rapidly as possible, not only for the improvement of the water supply, but also to make the watershed a source of revenue for future generations.

Pursuant to the settled policy of the Board and under the authority of Chapter 301 Laws of 1908, titles were secured to such properties in the watershed as were offered at a reasonable price.

During 1908, the following tracts were added to the city's holdings:

		Acres.
May 28.	Anna Mary Holly, house and lot, West Milford Township, Passaic County....	1
June 4.	Chas. D. Day, farm house, barn, &c., Vernon Township, Sussex County....	421
June 25.	Hannah E. Brown, house and barn, Stockholm, Hardyston Township, Sussex County	23
June 25.	Hiram Utter, hotel, 3 tenement barns, Stockholm, Hardyston Township, Sussex County	2
June 25.	Whitfield VanHouten, farmhouse, barn, &c., Vernon Township, Sussex County	123
July	The Hennion tract, house and barn near Charlotteburg, West Milford Township, Passaic County.....	47 2-3
July	Jeduthan A. Day, farmhouse, barn &c., Vernon Township, Sussex County....	435
July	Aline C. Lyon, mountain tract adjoining Oak Ridge reservoir tract, West Milford Township, Passaic County.....	184
July	Daniel D. Lewis, house, barn, &c., Stockholm, Vernon Township, Sussex Co..	100
July	Edward S. Rude, Lewis E. Rude, Josephine Matthews, two houses and outbuildings, Stockholm, Hardyston Township, Sussex County	23
Oct.	Michael J. Murphy, small farm house, barn, &c., at Echo Lake, West Milford Township, Passaic County.....	63
Nov.	Martha Morgan, two lots, village of Stockholm, Hardyston Township, Passaic County	1-3

Nov.	Margaret J. Sandford and Mary C. Shanley, portion of Orean Park tract, West Milford Township, Passaic County.....	9

Total additional acreage acquired...1432

The excessive growth of micro-organisms in the larger reservoirs during November gave a decided fishy and cucumber odor and taste to the water. On account of the location of the Standard Oil pipe lines and pumping station in the watershed it was natural that the oily taste should be generally attributed to supposed leaks in the oil line. The water department had, however, during the Summer inaugurated systematic microscopical examinations of the water from the several reservoirs, which showed the presence of certain organisms, principally Synura and Dinobryan in large quantities, the odor and taste being mainly due to the former. Synura came principally from the Clinton Reservoir and its excessive growth was probably caused by the low state of the reservoir due to the dry spell, which lasted from the middle of August to the end of the year. The water in the different reservoirs was treated by dissolving sulphate of copper at the rate of one pound of the sulphate to six million pounds of water, and the objectionable condition was entirely removed in about twelve days.

In the future, the examinations will be made so frequently that sufficient early notice of the presence of these growths in quantities, which would produce taste and odor, will be obtained to either allow prompt treatment or a temporary suspension of the use of the reservoirs affected, so that the water supplied to the City may be free from this objection.

Many of the water supplies of the country were similarly affected last year by these growths, and it is only within the last few years that any satisfactory treatment for this

trouble has been practicable. The Newark plant is advantageously arranged to allow the supply to be taken from different reservoirs at will, and this fact will materially assist in keeping down to a minimum the duration of this disagreeable condition of the water supply, which, while not dangerous to health, is very objectionable to the use of the water for potable purposes.

A laboratory for the purpose of making examinations of the water in conjunction with the testing of construction materials for the Street and Sewer Departments, has been established in the Annex of the City Hall.

Upon consultation with the Board of Health, an inspector has been appointed to patrol the watershed; the entire territory being divided into six districts and inspection made of one district each day to guard against possible pollution, and to give early notice of any conditions which might affect the quality of the water supply. This is to supplement the sanitary inspections being made by periodical trips of the representatives of the Board of Health.

CEDAR GROVE RESERVOIR.

This reservoir has continued in good condition during the year. The entire consumption of water for Newark and Belleville Township has been drawn from there. The supply was cut off from the intake on two occasions; once from February 15th to the 17th, on account of roily water due to heavy rains in the watershed, and at another time on account of a break of a 60x60 inch Y branch at Great Notch. This occurred on December 21st and lasted until January 2nd. This break was repaired by inserting a cast iron split sleeve placed on the inside of the spigot of the Y. branch and caulked with lead wool, which proved, after turning on the water, to be an entire success.

Besides the regular routine work, the fence on the east and west sides of the reservoir was painted.

ION
GALLONS
35
40
45
50

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ASTOR, LENOX AND
TILDEN FOUNDATIONS

DISTRIBUTING RESERVOIRS.

BELLEVILLE RESERVOIR.

As stated in last year's report, this reservoir should be cleaned and repointed this coming year.

It is also advisable to replace the standpipes for pump main No. 1 and No. 2, and use said mains in the future as discharge pipes for this reservoir.

HIGH SERVICE RESERVOIR.

South Orange Avenue and South 9th Street.

This reservoir has been drained, cleaned and repointed, and as it was noticed that the front wall around South Orange Avenue Reservoir was bulging, it was necessary to reset the same.

CONSUMPTION.

The number of new taps made during the year was 1,756 (a decrease of 938 from last year) of these 7 were of 6-inch; 6 of 4-inch; 1 of 3-inch; 51 of 2-inch; 74 of 1-inch and 1,617 of ⅝-inch diameter.

The number of taps at the first of January, 1908, in the city was 46,060, while the number of taps in use was 43,550.

The average daily consumption per tap in use was 818, which is a decrease as compared with 872 gallons in the year 1907. This may be attributed to the fact that as Newark is one of the largest manufacturing cities of the country, it was particularly affected by the general business depression during the year just passed.

CONSUMPTION STATEMENT FOR THE YEAR ENDING DEC. 31, 1908.

1908. MONTH	Total Consumption per Million Gallons per Month	Average Daily Consumption. Million Gallons	Mean Temperature	Rainfall Inches
January	1061.0	34.2	32.4	4.50
February	1126.2	38.8	28.0	3.98
March	1057.0	34.1	41.6	2.15
April	1040.2	34.7	51.6	2.52
May	1067.6	34.4	62.0	9.01
June	1092.6	36.4	71.6	4.17
July	1163.3	37.5	76.4	6.30
August	1129.2	36.4	72.8	7.74
September	1091.7	36.4	67.5	1.69
October	1119.7	36.1	57.9	2.10
November	1040.9	34.7	43.6	0.35
December	1052.2	33.9	34.7	3.15
Total	13041.6	427.6		47.66
Average		35.6		

DISTRIBUTION.

The extensions to street mains in the city during the year 1908 was as follows:

437	lineal	feet	of	24	inch	diameter.
1,061	"	"	"	20	"	"
1,124	"	"	"	16	"	"
3,254	"	"	"	12	"	"
2,264	"	"	"	10	"	"
3,813	"	"	"	8	"	"
37,173	"	"	"	6	"	"
628	"	"	"	4	"	"

$$49{,}754 \text{ lineal feet} = 9\frac{2234}{5280} \text{ miles.}$$

The approximate mileage of pipe of different diameters, deducting old pipes which were taken out and adding new

pipes of large size in place of the old pipe taken out, is as follows:

43,200	lineal	feet	of	60	inch	diameter.
141,197	"	"	"	48	"	"
82,192	"	"	"	42	"	"
49,718	"	"	"	36	"	"
24,920	"	"	"	30	"	"
49,897	"	"	"	24	"	"
41,471	"	"	"	20	"	"
24,870	"	"	"	16	"	"
52,675	"	"	"	12	"	"
70,969	"	"	"	10	"	"
72,027	"	"	"	8	"	"
1,106,183	"	"	"	6	"	"
152,297	"	"	"	4	"	"
275	"	"	"	3	"	"

$$1{,}911{,}891 \text{ lineal feet} = 362\frac{531}{5280} \text{ miles.}$$

This does not include any pipe connected with the High Pressure system.

Belleville Township laid 3,885 feet of 6-inch diamter.

The total length of pipe connected with the works is as follows:

In the city.....$362\frac{531}{5280}$ miles.

Belleville Township .....$14\frac{4501}{5280}$ miles.

Total .....$376\frac{5032}{5280}$ miles.

The amount of work done in relaying pipe was as follows:

833	lineal	feet	of	12	inch	diameter.
2,031	"	"	"	10	"	"
8,317	"	"	"	8	"	"
8,037	"	"	"	6	"	"

Total 19,268 lineal feet $= 3\frac{3428}{5280}$ miles.

The amount of work done in lowering pipe was as follows:

288	lineal	feet	of	30	inch	diameter.
990	"	"	"	12	"	"
300	"	"	"	8	"	"
3,670	"	"	"	6	"	"

Total 10,248 lineal feet $= 1\frac{4968}{5280}$ miles.

During the year 208 new hydrants were set, of these 106 were substituted in place of old hydrants and 102 were added to the number already in place, making the total number of hydrants:

In the city	2766
Silver Lake and Belleville Res.	13
Total	2779

The following statement shows the number, type, and the size of bottom connections of the different hydrants in use:

2—A. P. Smith hydrants, with 8″ bottom connection.
393—A. P. Smith hydrants, with 6″ bottom connection.
756—A. P. Smith hydrants, with 4″ bottom connection.
524—Galvin hydrants, with 4″ bottom connection (Mich. Brass and Iron Works).
152—Corey hydrants, with 6″ bottom connection (Renselaer Mfg. Co.)
175—Corey hydrants, with 4″ bottom connection (Rensselaer Mfg. Co.)
524—Kennedy hydrants, with 4″ bottom connection.
6—Ludlow hydrants, with 6″ bottom connection
123—Ludlow hydrants, with 4″ bottom connection.
11—R. D. Wood hydrants, with 4″ bottom connection.
110—Hewes & Phillips hydrants, with 4″ bottom connection.
3—Known as Ward hydrants, with 4″ bottom connection.

2779

The 24-inch main in South Street from dead end 440 feet east of Pacific Street to Jefferson Street, and the 20-inch line in Jefferson Street from South Street to Chestnut Street, has been completed.

A 16-inch main in Hamburg Place from Lang Street north to Ferry Street has been laid, and should be continued during the coming year in Ferry Street from Hamburg Place west to Jefferson Street, in order to connect the 24-inch main in Jefferson Street with the same.

A 12-inch main was laid in Belmont Avenue from dead end south of Bigelow Street to Hawthorne Avenue, and is a continuous feeder from the 20-inch main in Springfield Avenue to Hawthorne Avenue, with the exception of a short distance between Clinton Avenue and Alpine Street, which should be laid as soon as practicable.

In regard to relaying, considerable work has been done. Following out the suggestions of the National Board of Fire Underwriters, pipes of inadequate size were taken out and replaced with those of a larger diameter and it is the intention to continue this work.

Connections between dead ends have been continued where conditions permit the same.

HIGH PRESSURE SYSTEM.

During the last few years it was thought advisable to continue the High Pressure system, and therefore funds were provided for that purpose.

During last year, a 20-inch main was laid in Rector Street from Broad Street to Front Street, and also in New Jersey Railroad Avenue, east side from Market Street to East Mechanic Street, through the latter street to Ferry street and through Ferry Street to Prospect Street and water has been turned on. It is the intention to continue this line of pipe in Ferry Street from Prospect Street to Fillmore Street, through Fillmore Street north to Market Street, through Market Street to Bowery Street and through Bowery Street to Chapel Street; and also in Bruen Street from East Mechanic Street to Green Street; through Green Street east to McWhorter Street and through McWhorter Street to Johnson Street, and further in New Jersey Railroad Place west side from Market Street north to the Morris Canal, across the same to River Street, through River Street to Front Street, through Front Street to Ogden Street and through Ogden Street to Carlisle Place.

ELECTROLYSIS.

The city has been put to considerable trouble and expense during the past year on account of electrolysis. The water pipe in South 14th Street from Central Avenue to Orange Street had to be replaced with new pipes; services on a

great many other locations throughout the city had to be renewed, and it was thought advisable to engage the services of Mr. William E. Foss, a consulting engineer and expert on electrolysis, for the purpose of making a complete study of the electrolytic action on our pipe system, and he has furnished a very complete report on the subject. Under the heading of "Conclusion and Recommendation" he says: "The water pipes have already been damaged considerably by electrolytic corrosion, and the action is found to be continuing at the present time slowly but steadily at many places throughout the city.

The Board has taken up the question of the adjustment and rearrangement of the operation of the trolley roads with the Public Service Corporation, with a view to reduce this damage to the smallest possible amount. This matter is now pending and radical rearrangements of the distribution and return circuits for the electrical current operating the trolley lines must be had to prevent the continuance of serious damage to the water pipes. The Public Service Corporation have agreed to make some definite statement as to its attitude on this matter.

STABLE.

Not having sufficient accommodation for our horses, wagons, &c., it was thought advisable to construct a stable on property belonging to the city situated on the east side of South 8th Street, between 14th and 15th Avenues. The stable was built large enough to provide stalls for 24 horses, and is equipped with the most modern improvements. The building contains garage, offices and keeper's residence. There is also ample room for stock yard, &c.

Respectfully submitted,

G. SANZENBACHER,

Engineer and Superintendent, Department of Water.

DETAILED STATEMENTS

TO ACCOMPANY

Report of Engineer and Superintendent

DEPARTMENT OF WATER

STATEMENT OF PIPE LAID IN 1908.

MONTH 1908	LOCATION OF PIPE	Length in Lineal Feet								Stops	Hydrants
		24"	20"	16"	12"	10"	8"	6"	4"		
January	South Tenth St. from north side of Avon Ave. to north side of Woodland Ave.				691					1	
"	Woodland Ave. from South Tenth St. west							37		1	
"	West Rose St. from South Tenth St. east							52		1	1
"	South Tenth St. from Madison Ave. north				65					1	
"	South Twentieth St. from dead end north of Nineteenth Ave. north							24			
February	South Fifteenth St. from dead end north of Springfield Ave. to Eighteenth Ave.							779		2	2
"	Madison Ave. crossing South Fifteenth St.							78			1
"	Nineteenth Ave. crossing South Fifteenth S.							73		1	
"	South Nineteenth St. from dead end north of Clinton Ave., north to Alpine St.							169		1	
March	Ocean Ave. from Stuyvesant Ave. to Mead St. (Vailsburgh)							440		2	
"	Shanley Ave. from south side of Avon Ave. to north side Madison Ave.							507			1
"	Madison Ave. crossing Shanley Ave.							59		1	
"	Madison Ave. crossing Seymour Ave.							98		2	
"	Joseph St. from Euclid Ave. north to dead end							257		2	
"	Lister Ave. from Esther St. to Lockwood St.					292				1	
"	Albert Ave. from Joseph St. west to dead end							1,003		7	2
"	South Thirteenth St. from dead end south of Fourteenth Ave. south							120			
"	South Sixteenth St. from Fourteenth Ave. north to dead end							336			
"	Grafton Ave. from Highland Ave. to Lake St.							270			
"	Avenue R from Doremus Ave. north						3,459				
"	Backus St. from dead end east of Gotthart St. east							120			
"	Hillside Ave. from Hawthorne Ave. north to dead end							369		3	
April	Vorhees St. from Fabyan Pl. east to dead end							399			1
"	Loretto St. from Fabyan Pl. west to City Line							255			1
"	Lanark Ave. from dead end west of Sandford Ave. (Vailsburgh)								412	1	1
"	Lockwood St., crossing Morris Canal					60					
"	Lockwood St. from Albert Ave. north					373				1	1
"	Rose St. from Chadwick Ave. to Rose St.							304		1	
"	Passaic Ave., crossing Lockwood St.							86		2	
"	Brookdale Ave. from Valley St. north of Ocean Ave. (Vailsburgh)							558		1	1
"	Chelsea Ave. from South Orange Ave. north (Vailsburgh)							597			1
"	Berkeley Ave. crossing Clifton Ave.							73		1	
	Carried forward				756	725	3,459	7,003	412	33	13

STATEMENT OF PIPE LAID IN 1908—(*Continued*).

MONTH 1908	LOCATION OF PIPE	Length in Lineal Feet								Stops	Hydrants
		24"	20"	16"	12"	10"	8"	6"	4"		
	Brought forward				750	725	3,459	7,063	412	33	13
April	Kipp St. from Winans Ave. to Waverly Ave.							270			1
May	Heller Parkway from Summer Ave. to Woodside Ave.							319			
"	Heller Parkway, north side, from Highland Ave. to Lake St.							284		1	1
"	Hellery Parkway, south side, from Lake St. to Forest Hill Parkway							614		2	1
"	Foster St. crossing Dayton St.							39			
"	Avenue R from dead end north of Doremus Ave., north						48				
"	Whitney St. from South Orange Ave., north (Vailsburgh)							199		1	1
"	South Eighth St. from Fourteenth Ave., south to dead end				364					1	1
"	Delavan Ave. from North Seventh St. to North Ninth St.							587		2	2
"	Ridge St. from dead end south of Elwood Ave., south to Delavan Ave.							352		1	1
"	South Thirteenth St. from Sixteenth Ave., south							387			1
"	Eighteenth Ave. from South Fourteenth St. to South Sixteenth St.							533		2	
"	Eighteenth Ave. from South Twentieth St., west to City Line							64			
"	South Twentieth St. from Eighteenth Ave., south to dead end							340		1	1
"	South Nineteenth St. from Eighteenth Ave., north							232		1	
"	Mapes Ave. from Mapes Pl., west							151		1	1
"	Mapes Pl. from Mapes Ave., north							85		1	
"	Elizabeth Ave. from Peddie St. to Hawthorne Ave.							375		2	
June	Chancellor Ave. from dead end west of Clinton Pl., west							998		3	2
"	Peshine Ave. from Runyon St. to Hawthorne Ave.							674		2	1
"	Runyon St., crossing east side of Peshine Ave.							58		1	
"	North Eleventh St., crossing Springdale Ave.							77		2	
"	Springdale Ave. from dead end west of North Thirteenth St., west to City Line							75			1
"	North Thirteenth St., crossing north side of Springdale Ave.							25		1	
"	South Nineteenth St. from dead end south of Avon Ave., south							60			
July	Badger Ave. from Bigelow St., north to dead end							348			
"	Badger Ave. from the dead end south of Bigelow St., south to Hawthorne Ave.							1,387		4	3
"	Runyon St., crossing Badger Ave.							98		2	
"	Badger Ave., crossing south side of Clinton Ave.							60			
"	South Nineteenth St. from dead end north of Eighteenth Ave., north							204			
"	Belmont Ave. from Hawthorne Ave., north to dead end				1,273					3	3
	Carried forward				2,393	725	3,507	15,953	412	67	34

STATEMENT OF PIPE LAID IN 1908—(*Continued*).

MONTH 1908	LOCATION OF PIPE	Length in Lineal Feet								Stops	Hydrants
		24"	20"	16"	12"	10"	8"	6"	4"		
	Brought forward				2,393	725	3,507	15,953	412	67	34
July	South Eleventh St. from Avon Ave. to Woodland Ave.							616		1	1
"	Madison Ave., crossing South Eleventh St.							36			
"	Runyon St., crossing Belmont Ave.							98		2	
"	Peddie St., crossing Belmont Ave.							98		2	
"	New Jersey Railroad Ave., west side Vanderpool St. to Poinier St.							219			1
"	Alpine St. from Elizabeth Ave. to Johnson Ave.							468			
"	Woodside Ave., connecting two dead ends between Heller Parkway and Elwood Ave.							180			
"	Willoughby St. from St. James Pl. to Shaw Ave.							341		2	
August	Third Ave. from Fourth St., east to Morris Canal						207				1
"	South St. from dead end east of Pacific St., east to Jefferson St.	437									
"	Jefferson St. from South St. to Chestnut St.		1,061							1	
"	Runyon St. from dead end west of Seymour Ave., west to Hedden St.							144			
"	Frelinghuysen Ave., east side, from dead end south of Weston Ave., south							207			1
"	Frelinghuysen Ave., connecting 12" to dead end of 6", 900 ft. south of Weston Ave.						48				
"	Hunterdon St. from dead end south of Stengel Ave., south to Lyons Ave.							328		1	1
"	South Fifteenth St. from Clinton Ave., south							683		2	2
"	Oak St. from Clinton Pl. to South Fifteenth St.							611		2	2
"	Clifford St. from Tyler St., east							799		1	2
"	West Rose St. from dead end west of Chadwick Ave. to dead end east of South Tenth St.							1,007		2	1
"	Shanley Ave., crossing south side of West Rose St.							52		1	1
"	Tracy Ave. from West Rose St. to Avon Ave.							279			1
"	South St. from Jefferson St. to Adams St.				861					2	
"	Nineteenth Ave. from dead end east of South Seventeenth St., east to South Sixteenth St.							51			
"	Edmonds Pl. from Clinton Pl. to Demarest St.							419		2	1
"	Madison Ave. from South Sixteenth St. to South Seventeenth St.							232		1	
"	Schley St., connecting dead ends between Bragaw Ave. and Shaw Ave.							486			1
September	Van Buren St. from Warwick St. to Nichols St.							269			
"	Van Buren St. from Elm St. to Walnut St.							180			
"	Elm Road from Ann St. to East Kinney St.							193			
"	Dayton St. from Evergreen Ave., north							151		1	
	Carried forward	437	1,061		3,254	725	3,762	24,100	412	90	50

STATEMENT OF PIPE RELAID IN 1908.

MONTH 1908	LOCATION OF PIPE	Length in Lineal Feet 12"	10"	8"	6"	Stops	Hydrants
March	Essex St. from James St. to Orange St.	--	-----	-----	731	2	1
"	Brill St. from Bowery St. to Ferry St.	---	-----	-----	473	2	--
"	Hamburgh Pl., east of Avenue L.	---	-----	-----	27	--	--
April	Lockwood St. from Ferry St., north	---	1,700	-----	-----	5	3
"	Boyd St. from Springfield Ave. to West Kinney St.	---	-----	-----	635	2	1
May	South Eighth St. from Sixteenth Ave. to dead end, north of Fifteenth Ave.	883	-----	-----	-----	2	1
"	Bowery St. from Market St. to Chapel St.	---	-----	2,769	-----	12	5
"	Schalk St., crossing Bowery St.	---	-----	-----	74	2	--
"	Providence St., crossing north side of Bowery St.	---	-----	-----	25	1	--
"	Richard St., crossing Bowery St.	---	-----	-----	77	2	1
"	Brill St., crossing Bowery St.	---	-----	-----	74	2	--
"	Christie St., crossing Bowery St.	---	-----	-----	77	2	1
"	Freeman St., crossing south side of Bowery St.	---	-----	61	-----	1	--
"	Lexington St., crossing Bowery St.	---	-----	-----	77	2	1
"	Oxford St., crossing Bowery St.	---	-----	-----	74	2	--
"	Eighteenth Ave. from South Sixteenth St. to South Seventeenth St.	---	331	-----	-----	1	1
June	Springdale Ave. from Roseville Ave. to North Eleventh St.	---	-----	-----	694	4	--
"	Hudson St. from north side of Central Ave. to north side of Dickerson St.	---	-----	-----	208	1	--
"	East Mechanic St. from New Jersey R. R. Ave. to west side of McWhorter St.	---	-----	488	-----	2	--
July	Bay Ave., crossing Lehigh Valley R. R.—wrought iron pipe	---	-----	164	-----	--	--
September	Market St., south side, from Washington St. to Plane St.	---	-----	305	-----	1	--
October	Beecher St. from West Kinney St. to Halsey St.	---	-----	-----	736	1	2
"	South Fourteenth St., west side, from Central Ave. to Gould Ave.	---	-----	-----	1,575	4	3
"	Commerce St. from Market St., west	---	-----	342	-----	1	1
"	Arlington St. from William St. to Court St.	---	-----	822	-----	3	3
"	Pine St. from North Canal St. to Park St.	---	-----	412	-----	2	1
"	Boudinot St. from Pine St. to Mulberry St.	---	-----	-----	419	2	--
"	South Fourteenth St., west side, from Gould Ave. to Orange St.	---	-----	-----	623	3	2
November	Centre St. from Park Pl. to 150 ft. east of Mulberry St.	---	-----	891	-----	2	1
"	Centre St. from Park Pl., east	---	-----	-----	67	1	1
	Carried forward	883	2,031	6,254	6,666	67	29

STATEMENT OF PIPE RELAID IN 1908.—CONTINUED.

MONTH, 1908	LOCATION OF PIPE	Length in Lineal Feet 12"	10"	8"	6"	Stops	Hydrants
	Brought forward	883	2,031	6,254	6,666	67	29
November	Division Pl. from Centre St. to Park St.	---	-----	-----	671	2	1
"	Court St., north side, from Plane St. to High St.	---	-----	773	-----	3	1
"	South Canal St. from Lawrence St. to New Jersey R. R. Pl.	---	-----	1,150	-----	3	1
"	Warwick St., crossing Jefferson St.	---	-----	84	-----	3	1
"	Ferry St. from Prospect St. to 60 ft. east of Jefferson St.	---	-----	-----	700	5	--
December	Hensler St., crossing east side of Ferry St.	---	-----	28	-----	1	--
"	Patterson St., crossing east side of Ferry St.	---	-----	28	-----	1	--
	Totals	883	2,031	8,317	8,037	85	33

During the year 19,268 lineal feet of pipe have been relaid in the city, of which

883 lineal feet of 12 inch diameter
2,031 " " 10 " "
8,317 " " 8 " "
8,037 " " 6 " "
} 19,268 feet.

STATEMENT OF PIPE LOWERED IN 1908.

MONTH 1908	LOCATION OF PIPE	Length in Lineal Feet				Stops	Hydrants
		30"	12"	8"	6"		
January	Munn Ave., 700 ft. north of South Orange Ave., north (Vailsburgh)	---	-----	-----	60	--	--
March	South Fifteenth St. from Springfield Ave. to Avon Ave.	---	-----	-----	1,050	2	2
April	Lentz Ave. from Plum Point Lane, north	---	-----	-----	100	1	1
May	Market St., middle of block between Bowery St. and Mott St.	---	-----	-----	130	--	1
"	Fifteenth Ave. across South Eighth St.	---	-----	-----	75	2	1
"	Winans Ave. from Bergen St. to Eighteenth Ave.	---	-----	-----	1,300	2	2
"	Eighteenth Ave. from South Seventeenth St. to South Eighteenth St.	---	-----	-----	250	--	--
"	Parker St. between Grafton Ave. and Montclair Ave.	---	-----	300	-----	--	1
June	Napoleon St. from Hamburgh Pl. to Elm Road	---	-----	-----	1,300	4	4
"	Hudson St. from Dickerson St., north	---	-----	-----	200	1	--
"	Dickerson St. across Hudson St.	---	-----	-----	135	2	1
"	Hudson St. from Bond St. to New St.	---	-----	-----	325	1	--
"	Hudson St. from New St. to Hartford St.	---	-----	-----	270	--	--
"	Hudson St. from Hartford St. to Warren St.	---	-----	-----	270	1	1
"	Belmont Ave. from Bigelow St., north	---	600	-----	-----	--	1
"	Komorn St. from Hamburgh Pl. to Magazine St.	---	-----	-----	1,500	--	--
"	Komorn St. from St. Charles St. to Main St.	---	-----	-----	520	2	1
"	Komorn St. from Hamburg Pl., north	---	390	-----	-----	--	--
"	Runyon St. from Chadwick Ave., west	---	-----	-----	125	--	1
"	Runyon St. from Hedden St., west	---	-----	-----	150	--	--
August	Nineteenth Ave. from South Seventeenth St., west	---	-----	-----	250	1	--
November	Mt. Prospect Ave., west side from Heller Parkway to Elwood Ave.	---	-----	-----	600	--	--
December	Pump main No. 1, from west side of Linden Ave., west toward Belleville Reservoir	288	-----	-----	-----	--	--
	Totals	288	990	300	8,670	19	17

During the year 10,248 lineal feet of pipe have been lowered in the city, of which

288 lineal feet of 30 inch diameter
990 " " 12 " "
300 " " 8 " "
8,670 " " 6 " " } 10,248 feet.

PIPES LAID, RELAID AND LOWERED—YEAR ENDING DEC. 31, 1908.

	Length in Lineal Feet									Totals	Stops	Hydrants
	30"	24"	20"	16"	12"	10"	8"	6"	4"			
Pipe Laid (extensions)	---	437	1,061	1,124	3,254	2,264	3,813	37,173	628	49,754	139	80
Pipe Relaid (substitution of large for small pipes and replacing old horizontal cast pipes)	---	---	-----	-----	883	2,031	8,317	8,087	---	19,268	85	33
Pipe Lowered	288	---	-----	-----	990	-----	300	8,670	---	10,248	19	17
Miscellaneous (new valves, valves on hydrants, in substitution for broken valves and replaced hydrants)	---	---	-----	-----	-----	-----	------	------	---	------	127	106
Totals	288	437	1,061	1,124	5,127	4,295	12,430	53,880	628	79,270	370	236

Total pipe laid, relaid and lowered during the year equals 79,270 lineal feet, equals 15 7-528 miles.
Total mileage of pipe connected with the works at the end of the year, 362 531-5280 miles.

STATEMENT OF SERVICES FOR YEAR ENDED DECEMBER 31, 1908.

¾ Inch Services. Month.	No. of New Services.	No. of Services Renewed	No. of Taps Only	No. of Stops and Boxes	No. of New Water Takers	No. of Feet of Pipe	Charges
January	53	5	----	1	39	947.0	$ 799.00
February	29	8	----	---	39	533.0	486.00
March	125	2	----	---	46	2,429.5	1,770.00
April	278	5	----	1	129	5,285.5	3,949.00
May	229	3	----	2	87	5,076.5	3,250.00
June	239	2	----	---	81	4,300.0	3,366.00
July	147	---	----	---	97	2,696.0	2,058.00
August	236	14	----	1	90	4,786.0	3,451.00
September	69	---	----	---	68	1,336.5	966.00
October	55	21	----	3	79	1,061.0	1,001.00
November	79	38	----	---	101	1,392.0	1,486.00
December	78	3	----	---	95	1,364.5	1,122.00
Total	1,617	101	----	8	957	31,207.5	$23,704.00

STATEMENT OF SERVICES FOR YEAR ENDED DECEMBER 31, 1908.

1 Inch Services. Month.	No. of New Services	No. of Services Renewed	No. of Taps Only	No. of Stops and Boxes	No. of New Water Takers	No. of Feet of Pipe	Charges
January	2	-----	------	---	2	41.5	$ 40.00
February	1	-----	------	---	1	23.5	20.00
March	6	-----	------	---	6	114.5	120.00
April	9	-----	------	---	8	174.0	180.00
May	11	-----	------	---	4	146.0	220.00
June	7	-----	------	---	4	115.0	140.00
July	9	-----	------	---	8	172.5	180.00
August	8	-----	------	---	8	110.5	160.00
September	8	-----	------	---	8	166.5	160.00
October	5	-----	------	---	5	84.5	100.00
November	7	-----	------	---	7	193.0	140.00
December	1	-----	------	---	1	32.0	20.00
Total	74	----	----	---	62	1,373.5	$1,480.00

RECAPITULATION.

SIZE	No. of New Services	No. of Services Renewal	No. of Taps Only	No. of Stops and Boxes	No. of New Water Takers	No. of Feet of Pipe	Charges
¾ Inch	1,617	101	----	8	957	31,207.5	$23,704.00
1 Inch	74	---	----	---	62	1,373.5	1,480.00
Totals	1,691	101	----	8	1,019	32,581.0	$25,184.00

SPECIAL SERVICE CONNECTIONS.
FROM JAN. 1, 1908 TO DEC. 31, 1908.

MONTH	2"	3"	4"	6"	8"	Total
January	1	-----	1	1	-----	3
February	-----	-----	-----	-----	-----	-----
March	1	-----	1	-----	-----	2
April	3	-----	-----	-----	-----	3
May	4	-----	-----	2	-----	6
June	2	1	-----	-----	-----	3
July	3	-----	-----	-----	-----	3
August	6	-----	1	4	-----	11
September	19	-----	-----	-----	-----	19
October	7	-----	1	-----	-----	8
November	1	-----	-----	-----	-----	1
December	4	-----	2	-----	-----	6
Total	51	1	6	7	-----	65

METERS SET BY CONSUMERS, 1908.

MONTH	Trident						Lambert				Nash		Model "B"	Bee	Crown	Worthington	
1908	⅝"	1"	1½"	2"	3"	4"	⅝"	1"	2"	4"	⅝"	1"	Hersey	⅝"	⅝"	⅝"	Total
January	6	2	1	----	----	1	49	5	1	----	----	----	----	----	----	----	65
February	17	----	----	----	----	----	42	1	----	----	----	----	----	----	----	----	60
March	68	4	----	1	----	----	30	5	----	----	----	----	----	----	----	----	108
April	102	6	----	----	1	----	16	----	----	----	1	----	----	----	----	1	127
May	111	4	----	1	----	1	4	----	----	1	----	1	1	----	----	----	124
June	96	6	----	2	----	----	2	----	----	----	----	1	----	----	----	----	107
July	78	1	----	1	----	1	1	----	----	----	----	----	----	----	----	----	82
August	132	3	----	2	----	----	1	----	----	----	----	----	----	----	----	----	138
September	74	8	1	6	----	1	2	----	2	----	----	----	----	1	1	----	96
October	75	6	----	4	----	----	----	----	----	1	1	----	----	----	----	----	87
November	72	4	1	2	----	----	----	1	----	----	----	1	----	----	----	----	81
December	68	4	----	2	----	----	----	----	----	----	----	----	----	----	----	----	74
Totals	899	48	3	21	1	4	147	12	3	2	2	3	1	1	1	1	1,149

Number of meters in use January 1, 1908 19,595
Total number of meters set during 1908 1,149

Total number of meters in use January 1, 1909 20,744

HYDRANT STATEMENT

For the Year Ended December 31, 1908.

LOW SERVICE.

Month	No.	Location	Dia.	Hyd.	Stops
Feb.	1	East Sylvan Ave., north side, East of Washington Ave.	4"	1	1
March	2	N. W. Cor. Joseph St. and Albert Ave.	6"	1	1
	3	N. E. Cor. Albert Ave. and Catherine St.	6"	1	1
	4	N. E. Cor. Albert Ave. and Cornelia St.	6"	1	1
April	5	S. W. Cor. Lockwood St. and Passaic Ave.	6"	1	1
May	6	Market St., south side, between Bowery and Mott Sts.	6"	1	1
July	7	North West, Cor. N. J. R. R. Ave. and Poinier St.	4"	1	1
	8	Komorn St., west side, between Magazine and Niagara Sts.	6"	1	1
	9	S. W. Cor. Komorn and Niagara Sts.	4"	1	1
	10	Frelinghuysen Ave., east side, between Noble and Montague Sts.	6"	1	1
	11	N. W. Cor. Frelinghuysen Ave. and Meeker St.	6"	1	1
Aug.	12	Frelinghuysen Ave., east side, 900 ft. south of Weston Ave.	6"	1	1
	13	Clifford St., north side, 400 ft. east of Tyler St.	6"	1	1
	14	Clifford St., north side, 800 ft. east of Tyler St.	6"	1	1
Oct.	15	N. W. Cor. Astor St. and Ave. D.	6"	1	1
	16	Astor St., north side, between Ave. C and Ave. D.	6	1	1
	17	Beecher St., south side, 200 ft. east of Halsey St.	6"	1	1
	18	Hanford St., west side, 325 ft. north of Evergreen Ave.	4"	1	1
	19	S. W. Cor. Washington Pl. and Broad St.	6"	1	1
Nov.	20	Mitchell St., north side, 300 ft. west of Frelinghuysen Ave.	4"	1	1
Dec.	21	Clifton St., north side, between Sherman and Frelinghuysen Aves.	6"	1	1

Month	No.	Location	Dia.	Hyd.	Stops
	22	Branford St., north side, between Sherman and Frelinghuysen Aves.	6"	1	1
	23	Runyon St., north side, between Sherman and Frelinghuysen Aves.	6"	1	1
	24	Concord St., north side, between Sherman and Frelinghuysen Aves.	6"	1	1
	25	N. W. Cor. Frankford and St. Charles Sts.	6"	1	1
	26	S. E. Cor. Hamburgh Pl. and Merchant St.	8"	1	1
	27	Hamburgh Pl., west side, at junction of Lafayette St.	8"	1	1
	28	Hamburgh place, east side, between Patterson and Ferry Sts.	6"	1	1
	29	Clifford St., north side, between Adams and Jefferson Sts.	6"	1	1
	30	Congress St., west side, 125 ft. south of Ferry St.	6"	1	1

HIGH SERVICE.

Month	No.	Location	Dia.	Hyd.	Stops
Jan.	31	South 10th St., west side, between Woodland Ave. and Kent St.	6"	1	1
	32	N. E. Cor. West Rose and South 10th Sts.	6"	1	1
Feb.	33	S. W. Cor. South 15th St. and 18th Ave.	4"	1	1
	34	N. W. Cor. South 15th St. and 19th Ave.	4"	1	1
	35	N. E. Cor. Madison Ave. and South 15th St.	4"	1	1
	36	N. W. Cor. Bedford St. and Springfield Ave.	4"	1	1
Mar.	37	Shanley Ave., west side, between Avon and Madison Aves.	4"	1	1
	38	South 15th St., west side, between Woodland and Avon Aves.	4"	1	1
April	39	Vorhees St., north side, between Fabyan and Leslie Places	6"	1	1
	40	Lorretts St., north side, west of Fabyan Pl. at City Line	4"	1	1
	41	N. E. Cor. Lanark Ave. and Vail St. (Vailsburgh)	4"	1	1

Month	No.	Location	Dia.	Hyd.	Stops
	42	S. W. Cor. Brookdale and Ocean Aves. (Vailsburgh)	4"	1	1
	43	S. W. Cor. Chelsea and Mountain View Ave's (Vailsburgh)	6"	1	1
	44	N. W. Cor. Kipp St. and Winans Ave.	6"	1	1
May	45	N. W. Cor. Heller Parkway and Highland Ave.	4"	1	1
	46	S. W. Cor. Heller Parkway and De Graw Ave.	4"	1	1
	47	S. W. Cor. Whitney and Dow St's. (Vailsburgh)	6"	1	1
	48	N. E. Cor. Delavan Ave. and North 8th St.	4"	1	1
	49	N. E. Cor. Delavan Ave. and North 9th St.	4"	1	1
	50	N. W. Cor. Ridge St. and Delavan Ave.	4"	1	1
	51	S. 13th St., west side, between 16th and 17th Ave's	4"	1	1
	52	S. 19th St., west side, between 17th and 18th Ave's	4"	1	1
	53	S. 20th St., west side, between 18th and 19th Ave's	4"	1	1
	54	Mapes Ave., north side, west of Mapes Pl.	4"	1	1
	55	Parker St., west side, between Heller Parkway and Grafton Ave.	6"	1	1
June	56	Chancellor Ave., north side, 850 ft. west of Clinton Pl.	4"	1	1
	57	Chancellor Ave., north side, 1350 ft. west of Clinton Pl.	4"	1	1
	58	Peshine Ave., west side, between Runyon and Peddie St's	6"	1	1
	59	Springdale Ave., north side, west of N. 13th St., at city line	6"	1	1
	60	N. E. Cor. Mt. Prospect and Elwood Ave's.	4"	1	1
July	61	Badger Ave., west side, between Bigelow and Runyon St's	4"	1	1
	62	Badger Ave., west side, between Runyon and Peddie St's	4"	1	1
	63	N. W. Cor. Badger Ave. and Runyon St.	4"	1	1

Month	No.	Location	Dia.	Hyd.	Stops
	64	S. 11th St., west side, between Avon and Woodland Ave's	4"	1	1
	65	N. W. Cor. Belmont Ave. and Runyon St.	6"	1	1
	66	N. W. Cor. Belmont Ave. and Peddie St.	6"	1	1
	67	Belmont Ave., west side, between Runyon and Peddie St's	6"	1	1
	68	S. W. Cor. Clifton and 3rd Ave's	6"	1	1
Aug.	69	Third Ave., south side, 200 ft. east of 4th St.	6"	1	1
	70	N. W. Cor. Hunterdon St. and Lyons Ave.	6"	1	1
	71	N. W. Cor. Oak St. and Clinton Pl	6"	1	1
	72	Oak St., north side, 340 ft. west of Clinton Pl	6	1	1
	73	S. 15th St., west side, opp. Oak St	6"	1	1
	74	S. 15th St., west side, 250 ft. south of Oak St	6"	1	1
	75	W. Rose St., north side, between Shanley and Treacy Ave's	6"	1	1
	76	S. W. Cor. Treacy Ave. and W. Rose St.	6"	1	1
	77	S. W. Cor. Shanley Ave. and W. Rose St.	6"	1	1
	78	S. W. Cor. Edmonds and Clinton Pl's	6"	1	1
	79	Schley St., west side, between Bragaw and Shaw Ave's	6"	1	1
Sept.	80	N. W. Cor. Heckel St. and Bloomfield Ave. (Silver Lake)	6"	1	1
	81	N. E. Cor. Belmont and Bloomfield Ave's. (Silver Lake)	4"	1	
	82	S. E. Cor. Belmont Ave. and Lawrence St. (Silver Lake)	4"	1	1
	83	S. E. Cor. Belmont Ave. and Honiss St. (Silver Lake)	4"	1	1
	84	Heckel St., west side, between Honiss and Lawrence St. (Silver Lake)	6"	1	1
	85	Heckel St., west side at dead end south of Orange branch of Greenwood Lake R. R. (Silver Lake)	6"	1	1
	86	S. W. Cor. Heckel and Lawrence St's. (Silver Lake)	6"	1	1
	87	N. E. Cor. Honiss and Heckell St's. (Sil- (Silver Lake)	4"	1	

Month	No.	Location	Dia.	Hyd.	Stops
	88	Clifton Ave., west side, between Montclair and Grafton Ave's	6"	1	1
	89	S. 14th St., east side, between Gould Ave. and Orange St	6"	1	1
Oct.	90	Arlington St., east side, between Nichols Alley and Court St	6"	1	1
	91	Arlington St., east side, between William St. and Nichols Alley	6"	1	1
	92	High St., west side, between Stirling St. and 13th Ave	6"	1	1
	93	N. E. Cor. Park Ave. and N. 12th St.	4"	1	1
Nov.	94	S. 13th St., west side, between 15th and 16th Ave's	6"	1	1
	95	N. E. Cor. Court and High St's	4"	1	1
	96	S. W. Cor. Court St. and Coe's Pl	6"	1	1
	97	S. E. Cor. Court and High St's	6"	1	1
	98	N. W. Cor. Grafton and Woodside Ave's.	6"	1	1
	99	Mt. Prospect Ave., east side, between Heller Parkway and Elwood Ave	6"	1	1
	100	Mt. Prospect Ave., east side, between Heller Parkway and Grafton Ave	6"	1	1
Dec.	101	N. E. Cor. Berkeley Ave. and Parker St.	4"	1	1
	102	N. 8th St., west side, between Berkeley and Chester Ave's	4"	1	1

HYDRANTS REPLACED DURING THE YEAR 1908.

LOW SERVICE.

Month	No.	Location	Dia.	Hyd.	Stops
Jan.	1	S. W. Cor. Ferry and Van Buren St's	4"	1	1
Feb.	2	N. E. Cor. Komorn and St. Francis St's	6"	1	
	3	S. E. Cor. Polk St. and Passaic Ave	4"	1	1
	4	Polk St., east side, between Clover and Market St's	4"	1	
March	5	S. W. Cor. Esther St. and Lister Ave	6"	1	1
	6	N. W. Cor. Esther St. and Albert Ave	4"	1	1
	7	Essex St., west side, between James and Orange St's	6"	1	1
April	8	S. W. Cor. McWhorton and Green St's	4"	1	1

Month	No.	Location	Dia.	Hyd.	Stops
	9	N. W. Cor. Pacific and Oliver St's.....	4"	1	1
	10	N. W. Cor. Albert Ave. and Lockwood St.	4"	1	1
	11	S. W. Cor. Walnut and Adams St's.....	4"	1	
May	12	N. W. Cor. Pacific and E. Kinney St's....	4"	1	1
	13	S. W. Cor. Richards and Bowery St's....	6"	1	1
	14	N. W. Cor. Bowery and Schalk St's.....	6"	1	1
	15	S. E. Cor. Bowery and Brill St's.....	6"	1	1
	16	S. W. Cor. Lexington and Bowery St's...	6"	1	1
	17	N. W. Cor. Bowery and Oxford St's...	6"	1	1
	18	N. W. Cor. Bowery and Market St's...	6"	1	1
	19	S. W. Cor. Christie and Bowery St's....	6"	1	1
	20	S. E. Cor. Market and Arlington St's...	4"	1	1
	21	N. W. Cor. Bowery and Freeman St's...	6"	1	1
	22	S. W. Cor. Mulberry and Park St's.....	4"	1	
June	23	Napoleon St., west side, between Hamburgh Pl. and New York Ave.....	4"	1	1
	24	Napoleon St., west side, between Elm Rd. and New York Ave.....	4"	1	1
	25	Komorn St., west side, between Hamburgh Pl. and Niagara St.....	4"	1	1
July	26	S. W. Cor. Komorn and St. Charles St's..	4"	1	1
	27	S. W. Cor. River and Cherry St's.....	6"	1	1
	28	Vesey St., north side, between McWhorter and Pacific St's.....	6"	1	1
	29	S. W. Cor. Pacific and Johnson St's.....	4"	1	
	30	Ferry St., south side, opp. Christie St.....	4"	1	
Aug.	31	S. W. Cor. Tyler and Walnut St's.....	6"	1	1
	32	N. E. Cor. Hill and Washington St's....	6"	1	1
Sept.	33	Ogden St., east side, between 4th Ave. and Gouverneur St.....	6"	1	1
Oct.	34	N. W. Cor. Herman and Johnson St's...	4"	1	
	35	Beecher St., west side, 200 ft. south of W. Kinney St.....	6"	1	1
	36	S. W. Cor. Commerce and Market St's..	6"	1	1
	37	N. E. Cor. Polk and Ferry St's.....	6"	1	1
Nov.	38	S. E. Cor. Centre St. and Park Pl.....	6"	1	1
	39	Centre St., north side, opp. Division Pl...	6"	1	1
	40	Division Pl., west side, between Centre and Park St's.....	6"	1	1

Month	No.	Location	Dia.	Hyd.	Stops
	41	S. Canal St., south side, 100 ft. west of Abel St.	6"	1	1
	42	N. W. Cor. Warwick and Jefferson St's.	6"	1	1
Dec.	43	N. E. Cor. Washington and Linden St's.	6"	1	1
	44	Peddie St., south side, 400 ft. east of Frelinghuysen Ave.	6"	1	
	45	Camp Alley, at dead end, south of Camp St.	4"	1	1
	46	S. E. Cor. Hamburgh Pl. and Paterson St.	6"	1	1
	47	Congress St., west side, between Ferry and Lafayette St's.	6"	1	1

HIGH SERVICE.

Month	No.	Location	Dia.	Hyd.	Stops
Jan.	48	N. W. Cor. S. 10th St. and Madison Ave.	6"	1	1
Feb.	49	S. W. Cor. Roseville and 4th Ave's.	4"	1	
	50	N. E. Cor. Wickliffe St. and 13th Ave.	4"	1	
	51	N. W. Cor. Berger St. and 18th Ave.	4"	1	
	52	Broome St., west side, between Spruce and Montgomery St's.	4"	1	
	53	N. W. Cor. 4th St. and Central Ave.	4"	1	
	54	N. W. Cor. Camden St. and 14th Ave.	4"	1	
March	55	N. W. Cor. Belmont Ave and Rose St.	4"	1	
	56	S. W. Cor. Park Ave. and N. 13th St.	4"	1	
	57	N. W. Cor. Boston St. and S. Orange Ave.	4"	1	1
	58	S. W. Cor. Boyd and W. Kinney St's.	4"	1	1
	59	S. W. Cor. Bank and Boston St's.	4"	1	
	60	S. W. Cor. S. 15th St. and Springfield Ave.	4"	1	
April	61	Boyd St., west side, between Springfield Ave. and W. Kinney St.	6"	1	1
May	62	S. W. Cor. W. Kinney and Livingston St.'s.	4"	1	1
	63	N. E. Cor. Montgomery St. and Belmont Ave.	4"	1	
	64	S. 8th St., west side, between 14th and 15th Ave's.	6"	1	1
	65	S. 8th St., west side, between 15th and 16th Ave's.	6"	1	1

Month	No.	Location	Dia.	Hyd.	Stops
	66	N. W. Cor. S. 10th St. and Woodland Ave.	4"	1	
	67	Winans Ave., west side, between Kipp St. and 18th Ave.	6"	1	1
	68	S. W. Cor. Sheffield and Orange St's.	4"	1	1
	69	N. E. Cor. Clinton and Chadwick Ave's.	4"	1	1
	70	N. E. Cor. 18th Ave. and S. 14th St.	4"	1	
June	71	S. 8th St., west side, between 13th and South Orange Ave.	4"	1	1
	72	N. E. Cor. Jay and Dickerson St's.	4"	1	
	73	N. 13th St., west side, between Park and 6th Ave's.	4"	1	1
July	74	S. 11th St., west side, between Woodland and Springfield Ave's.	4"	1	1
	75	S. 11th St., west side, between Avon and Madison Ave's.	4"	1	
	76	N. W. Cor. S. 11th St. and Woodland Ave.	4"	1	1
	77	N. W. Cor. Rutger St. and South Orange Ave.	4"	1	1
	78	Holland St., west side, between Gold St. and 16th Ave.	4"	1	
	79	Holland St., west side, between Springfield Ave. and Gold St.	4"	1	
	80	S. W. Cor. Hunterdon and Warren St's.	6"	1	
	81	South Orange Ave., north side, opp. S. 15th St.	6"	1	1
	82	South Orange Ave., north side, 300 ft. west of S. 12th St.	6"	1	1
	83	N. W. Cor. S. 12th St. and South Orange Ave.	4"	1	
Aug.	84	N. 6th St., west side, between 1st and 2nd Ave's.	4"	1	
	85	S. W. Cor. Bloomfield Ave. and Stone St.	6"	1	1
Sept.	86	S. W. Cor. Springfield Ave. and S. 18th St.	4"	1	1
	87	N. W. Cor. High St. and Springfield Ave.	4"	1	
Oct.	88	S. W. Cor. N. 11th St. and Park Ave.	4"	1	
	89	S. 14th St., west side, between Central and 9th Ave's.	6"	1	1

Month	No.	Location	Dia.	Hyd.	Stops
	90	N. W. Cor. S. 14th St. and 9th Ave.....	4"	1	1
	91	S. 14th St., west side, between 9th and Gould Ave's.....	6"	1	1
	92	S. W. Cor. S. 14th St. and Gould Ave...	6"	1	1
	93	S. 12th St., west side, between Central and 9th Ave.....	4"	1	
	94	N. W. Cor. Arlington and Court St's....	6"	1	1
	95	N. W. Cor. Wickliffe and School St's....	4"	1	1
	96	Highland Ave., west side, 300 ft. north of Verona Ave.....	4"	1	
	97	N. W. Cor. Hunterdon St. and South Orange Ave.....	4"	1	
	98	S. W. Cor. S. 14th and Orange St's.....	6"	1	1
Nov.	99	Brookdale Ave., west side, between South Orange Ave. and Abinger Pl. (Vailsburgh)	4"	1	
	100	S. W. Cor. Dover St. and South Orange Ave. (Vailsburgh).....	4"	1	1
	101	N. W. Cor. 4th and Dickerson St's.....	4"	1	
Dec.	102	N. W. Cor. Boston St. and 13th Ave.....	4"	1	1
	103	N. W. Cor. Rutger and 13th Ave.....	4"	1	1
	104	N. W. Cor. N. 8th St. and Central Ave..	4"	1	
	105	S. 8th St., west side, between Central and 11th Ave's.....	4"	1	
	106	S. 6th St., west side, between South Orange and 13th Ave's....			

Summary of Statistics of the Newark, N. J., Water Works for the Year Ending December 31, 1908

In form recommended by the New England Water Works Association.

GENERAL STATISTICS.

Population by census, 1905.....283,000
Date of Construction.....1889-1891
By whom owned.....City of Newark
Source of supply.....Pequannock River
Mode of supply.....Gravity

STATISTICS OF CONSUMPTION OF WATER.

Estimated total population at date.....311,000
Estimated population on lines of pipe.....311,000
Estimated population supplied.....311,000
Total consumption for the year.....13,041.6 mill. gallons
Passed through meters.....4,941.2 mill. gallons
Percentage of consumption metered.....37.9%
Average daily consumption.....35.6 mill. gallons
Gallons per day to each inhabitant.....114 gallons
Gallons per day to each consumer.....114 gallons
Gallons per day to each tap in use.....817 gallons
Cost of supplying water, per million gallons figured on total maintenance.....$25.37
Total cost of supplying water, per million gallons figured on total maintenance plus sinking fund, and interest on bonds.....$77.78

STATISTICS REGARDING DISTRIBUTION SYSTEMS.

MAINS.

Kind of pipe.....cast iron and steel
Sizes, from.....4 inch to 60 inch
Extended .....49,754 feet during the year.
Discontinued .....0 feet during the year
Total now in use.....$362\frac{531}{5280}$ miles
Length of pipe less than 4 inches diameter.....275 feet
Number of hydrants added during the year.....102
Number of public hydrants now in use.....2766
Number of stop gates added during year.....180
Number of stop gates now in use.....4889
Number of stop gates smaller than 4 inch.....6
Range of pressure on distributing mains....25 to 75 lbs.
Range of pressure on high pressure system..90 to 160 lbs.

SERVICE.

Kind of pipe.....lead and cast iron
Sizes .....⅝-inch to 6-inch
Extended .....33,833 feet
Total now in use .....174½ miles
Number of service taps added during year.....1756
Number now in use.....43,550
Average length of service.....20 feet
Average cost of service for the year (⅝" diameter)..$13.64
Number of meters added.....1,149
Number now in use.....20,744
Percentages of services metered.....47.5%
Percentage of receipts from metered water.....69.6

FINANCIAL STATISTICS.

RECEIPTS.

Balance brought forward from receipts, Jan. 1, 1908		$ 51,597.71
From water rates—		
Fixture rates	$295,766.98	
Meter rates	679,438.23	
Total from consumers		975,205.21
For hydrants	free	
" fountains	free	
" street watering	free	
" public bulidings	free	
" miscellaneous uses	$ 24,966.79	
Total from municipal departments	8,613.72	
From bond issue	150,000.00	
" other sources	83,963.79	$ 267,544.30
Total		$1,294,347.22

EXPENDITURES.

Operation (management and repairs)		$ 330,922.40
Interest on bonds	$468,655.00	
Payment of bonds	20,000.00	
Sinking Fund	213,926.94	702,581.94
Water Works Construction—		
Extension of mains and feeders	$80,061.38	
" " services	30,990.81	
" " meters	16,415.50	
Total Construction		127,467.69
Unclassified expenses—		
Repair meters, handling material, etc.		14,363.59
Balance		119,011.60
Total		$1,294,347.22

Net cost of works to date (less old plant charged off) and less 2% annual depreciation on distribution	$11,142,927.59
Bonded debt at date (including refunded debt)	12,207,000.00
Value of Sinking Fund at date	3,712,559.56
Average rate of interest, per cent	3.933%

FINANCIAL STATEMENT

ACCOUNTING DIVISION

DEPARTMENT OF WATER

Year Ending December 31, 1908

FINANCIAL STATEMENT

ACCOUNTING DIVISION

DEPARTMENT OF WATER

Year Ending December 31, 1908

NEWARK, N. J., March 1, 1909.

MR. WILLIAM E. GREATHEAD, CLERK,

Board of Street and Water Commissioners, Newark, New Jersey:

DEAR SIR:—I herewith submit Financial Statements and Trial Balance of the Department of Water, for the year ending December 31, 1908.

Respectfully yours,

H. D. NORTHROP,

Cashier.

DISBURSEMENTS FOR 1908

Interest on Water Bonds	$468,186.33
Sinking Fund Payments	211,850.00
Bonds Redeemed	2,076.94
Monthly Pay Roll	71,440.66
Weekly Pay Roll	206,541.14
Extra Services, Revising and Opening New Assessment Books and making Block and Lot Books	3,837.08
Petty Expenses, Engineering Department	2,551.86
Petty Expenses, Accounting Division	1,258.30
Water Meters	12,678.60
Hydrants	6,643.04
Meter Repair parts	2,561.62
Hydrant Repair parts	253.25
Cast Iron Pipe	35,375.91
Wrought Iron Pipe	160.90
Lead Pipe	6,098.64
Pig Lead	6,193.32
Extra Heavy Pipe	211.41
New Stable, South 8th St	18,282.00
Architect for New Stable	1,065.80
Grading for New Stable	416.00
Grading, Paving and Curbing at New Stable	1,585.13
Fixtures for New Stable	232.95
Elevator, gate and wheels for New Stable	523.50
Furniture for New Stable	120.69
Weather strips, etc., for New Stable	278.50
Gas fitting and plumbing for New Stable	1,349.12
Printing and Stationery	3,633.14
General Supplies	3,206.66
Electricity	130.43
Electrical Supplies	121.46
Refund and Rebates	227.52
Telephone Service	314.62
Gas	246.60
Newark Directory	36.00
Ice	36.65
Insurance	284.62
Electrical Instruments	114.00
New Adding Machine	450.00
Engineer Supplies	413.58

Gasolene and Kerosene	582.78
Plumber's Service Stock Supplies	1,660.73
Stop Boxes	2,136.41
Curb Boxes	2,115.66
Corporation and Curb Stops	4,127.85
Valves, Gates, etc	5,824.70
Valves and Sleeves	2,270.69
Castings	5,971.06
Jute and Oakum	335.00
Lumber	2,345.24
Painting and Supplies	1,881.37
Gum Rubber Boots	529.75
Coal and Wood	1,222.51
Advertising	274.70
Freight	332.12
Repairing Street Cuts	1,815.96
Special Steel for Wedges	1,353.60
Special Service Repairs	9.66
Mason's Work and Material	1,490.74
Inspection of Pipe	385.49
Investigating Electrolysis	1,820.46
Repair Tools	2,106.32
Forging and Grinding Tools	457.13
Pat. Sleeves and Gates	108.90
Hardware	169.92
Stone Drag	27.00
Copper Tank	86.00
New Pump	450.00
Solder	498.83
Trees	613.48
Seeds and plants	339.00
Hose	340.45
Building New Fountains	395.07
New Fence at South Orange Reservoir	150.00
Photography	150.38
Rent Telephone Poles	62.25
Galvanized Pipe	56.63
New Maps	158.50
Tax	3,089.13
Wagon Scales	300.00
Clay Pipe	35.33
General Repairs	677.52
General Expense	27.35

Hay, Feed, Oats, etc.	2,984.06
Shoeing Horses	737.20
Board of Horses	1,536.50
Horse, Wagon and Truck Hire	1,875.25
New Wagon	225.00
Wagon Repairs	1,865.41
Repair Harness, etc.	348.14
Veterinary	150.25
New Horse	300.00
Stable Supplies	551.88
Drugs and Chemicals	362.73
Copying and Recording Deeds	39.35
Searching Titles	1,708.97
Addressograph Supplies	81.43
Rent of Automobile	1,893.00
Repairs to Automobile	1,882.10
Water from Belleville	18.58
Repair Belleville Reservoir	300.19
Repair South Orange Ave. Reservoir	472.50
Painting Keeper's House, Belleville	125.00
New Furnace, Belleville Reservoir House	119.75
Extraordinary Labor	91.50
Storage, H. P. Pipe	10.00
Launch and Row Boats	155.00
High Pressure Castings	138.33
Special Doors for H. P. Vault	235.00
H. P. Iron Pipe	2,049.38
H. P. Castings	1,012.84
Special Castings for Great Notch	102.32
Boiler for Thawing Hydrants	385.00
Gasolene Storage Equipment	411.70
Pipe Jointers	111.76
Expert on Leaking New Storage Reservoir	275.00
Repairs to Belleville Houses	421.30
Expense, Inspection Pavement, Boston	536.45
Expense, Trip to Trenton	280.82
Expense, Report of Iron Mine	20.00
Expense, Option on Property	50.00
Perforated Drum for South Orange Ave. Reservoir	55.00
Expenses of Commissioners to Washington and Inspection Newark Bay	758.12
Board and Meals	24.45
Ditch at Butterworth's Factory	170.00
Iron Work on Lockwood St. Bridge	335.40
	$1,145,448.57

COMPARATIVE STATEMENT OF DISBURSEMENTS 1907-1908

		1907.	1908.
Main Street Extensions		$91,458.51	$42,828.35
Feeders		38,334.37	29,129.70
Reconstruction		23,363.04	36,396.80
Maintenance General and Repairs		24,585.86	27,491.45
Repair of Tools		1,252.20	1,698.65
General Expense		8,017.45	8,297.34
Handling Material		1,157.56	1,263.47
Engineer and Sup't. Expense		16,387.69	23,692.89
Accounting Division Expense		37,721.78	44,399.39
Meter Division Expense		18,264.36	22,296.31
Distributing Reservoirs		6,829.53	10,634.74
Meter Repairs		9,016.53	11,613.67
Repair, Department Meters		3,509.55	1,486.45
Repair Belleville Reservoir		202.35	864.54
Repair, South Orange Avenue Reservoir		281.40	1,566.68
Repair, Services		9,058.10	9,373.24
Repair, Hydrants and Setting		17,488.28	19,665.70
Inspection, Regular	$12,617.00		
Inspection, Extra	13,073.75		
		19,683.65	25,690.75
Stable Expense		8,400.16	10,472.25
Service Accounts		37,228.24	37,388.45
Pumping Stations		2,468.30	2,223.97
Maintenance New Water Supply		15,303.40	29,932.11
Miscellaneous Labor		3,383.35	2,543.78
Stable Stock and Fixtures		216.40	300.00
New Meters		21,420.65	13,393.35
New Hydrants		4,581.02	5,958.79
Electrolysis Inspection			2,870.24
Insurance		347.21	347.21
General Supplies		2,392.69	3,822.42
New Tools		674.03	500.00
Repair, Street Mains		1,889.81	3,325.75
Sinking Fund		211,850.00	213,926.94
Interest on Water Bonds		468,655.00	468,655.00
Loss and Gain, Refunding, etc		1,841.86	252.96
High Pressure Water System		393.96	26,332.26
Maintenance New Storage Reservoir		3,546.49	4,714.67
Maintenance Conduits		9,643.23	9,689.61
Maintenance Reservoirs, Grounds, etc		6,829.53	10,634.74

ACCOUNTS RECEIVABLE

December 31, 1908.

Advance Water Rent Account	$8,956.64
Fractional Water Rent Account	635.04
Measured Water Rent Account	59,178.77
Special Water Account	722.48
Building Water Account	115.76
Arrears Water Rent Account	4,169.59
Service Collection Account	3,341.00
Sundry Personal Accounts	85,516.17
Total	$162,635.45

TRIAL BALANCE

December 31, 1909.

Cash	$119,011.60
Construction	2,670,537.67
Stable Stock and Fixtures	10,552.35
Petty Cash	306.07
Office Furniture, Fixtures and Fittings	9,233.90
Water Meter Account	2,599.75
Department Meters	13,683.00
Hydrant Account	649.00
Insurance	271.12
Street Mains, Stock and Material	24,415.24
Service Stock	4,596.22
Real Estate, General	129,391.51
Tool Account	11,336.11
Meter Repair Stock	1,796.15
High Pressure Water System, No. 1	102,666.39
High Pressure Water System, No. 2	8,103.33
High Pressure, Stock and Material	28,828.55
Surplus and Deficiency	584,151.87
New Water Supply	6,219,568.67
Service Collection Account	3,341.00
Advance Water Rent Collection Acct.	8,956.64
Fractional Water Rent Collection	635.04
Building Collection Account	115.76
Special Water Collection Account	722.48
Measured Water Collection Account	59,178.77
Arrears Water Rent Collection Acc't	4,169.59

Sundry Personal Collection Account..		85,516.17	
Cedar Grove Res., Stock and Fixtures		1,263.50	
New Storage Res., Material Account..		1,127.55	
New Storage Res., Construction Acc't:			
Balance of Bond Issue $	78,273.49		
Cost	1,902,001.51		
		1,980,275.00	
General Bond Account.....			$12,087,000.00
		$12,087,000.00	$12,087,000.00

ASSETS AND LIABILITIES

Cash Balance, Dec. 31, 1908.....	$119,011.60	
Property	11,142,927.59	
Accounts Receivable.....	162,635.45	
New Storage Res. Construction Acct.	78,273.49	
General Water Bonds.....		$12,087,000.00
Surplus and Deficiency.....	584,151.87	
	$12,087,000.00	$12,087,000.00

SCHEDULE OF PROPERTIES, 1908

DEPARTMENT OF WATER.

Belleville, Pump and Boiler House..	$23,149.13	
Belleville, New Chimney.....	4,715.57	
Engineer and Firemen's Dwellings...	8,025.00	
		$35,889.70
Pumping Engines, No's. 1, 2, 3, 4....	36,551.25	
New Boilers.....	12,702.23	
		$49,253.48
River Wall Dock and Basin.....		20,306.25
Driven Wells.....	19,098.04	
Drilled Wells.....	31,013.82	
Caisson Wells.....	2,103.82	
		52,215.68
Belleville Keeper's House.....	3,500.00	
Belleville Receiving Reservoir.....	130,748.62	
High Service Engine House and Boiler	17,236.97	
High Service Pumping Engines, No's. 1 and 2.....	8,844.50	
High Service Reservoir, S. O. Ave....	87,242.45	
Low Service Reservoir, Clifton Ave...	112,174.43	
		359,746.97

Supply and Distributing Mains, General Distributing Feeders, Street Mains, etc.		2,080,039.99
Street Mains Laid in 1908	42,828.35	
Feeders Laid in 1908	29,129.70	
		71,958.05
Material, New Storage Reservoir		1,127.55
		$2,670,537.67

REAL ESTATE

No. 1.	No. 128 Halsey Street	26,964.15	
No. 5.	Nominal	100.00	
No. 6.	Seventh and Summer Aves.	4,000.00	
No. 12.	Ground and Building City Stables	26,958.47	
No. 13.	Right of Way and Alley, Millbrook Sewer	75.00	
No. 14.	Drift Street at Factory Street Nominal	20.00	
No. 16.	Clifton Avenue Pump House.	6,000.00	
No. 18.	Low Service Res. Nominal	1.00	
No. 52.	Hecker Street, Nominal	100.00	
No. 53.	S. O. Ave. Res., Nominal	1.00	
No. 54.	Cor. 14th Ave. and 9th St.	4,975.00	
No. 55.	Land and Bldg., New Stables	32,123.42	
No. 56.	Belleville Pump House, and Six Houses	11,883.64	
No. 57.	Opposite Pump House	1,693.92	
No. 58.	Belleville Res., Nominal	1.00	
No. 59.	Part of Belleville Res. Prop.	532.50	
No. 60.	Back of Belleville Res. Prop.	11,113.86	
No. 61.	Portion of Right of Way, Supply Main No. 2	450.00	
No. 62.	Portion of Right of Away, Supply No. 2	339.00	
No. 63.	Portion of Right of Way, Supply Main No. 2	389.55	
Land for Drilled Wells, Belleville, N. J.		1,670.00	
			129,391.51
Total			$2,799,929.18

INVENTORY

December 31, 1908.

Street Mains, Stock and Material.....		$24,415.24	
High Pressure, Stock and Material...		10,599.62	
Service Stock and Material.....		4,596.22	
Hydrants on Hand.....		649.00	
Water Meters on Hand.....		2,599.75	
Meter Repair Stock.....		1,796.15	
Tools		11,336.11	
Stable Stock and Fixtures.....		10,552.35	
Office Furniture, Fixtures and Fittings		9,233.90	
Cedar Grove Reservoir.....		1,263.50	
Petty Cash.....		306.07	
Water Meters Owned and Set by the Department		13,683.00	
Insurance		271.12	
			$91,302.03
New Water Supply.....		6,219,568.67	
New Storage Reservoir.....		1,902,001.51	
H. P. Water System, No. 1.....	$102,666.30		
H. P. Water System, No. 2.....	26,329.26		
		128,995.56	
			8,250,565.74
			$8,341,867.77

Expended on Account of New Storage Reservoir and Thirty-six Inch Cast Iron High Service Supply Pipe Line,

To December 31, 1908.

New Storage Reservoir, Tunnel and Sixty-inch Steel Pipe Line.

Labor	$57,765.81	
Iron Pipe and Castings	82,247.33	
Inspecting Pipe	1,054.22	
Payments on Contracts	1,202,920.18	
Engineering Expense, etc.	31,028.11	
Interest on Loan	119,159.25	
Taxes	56.73	
Land	93,689.39	
Right of Way	1,550.00	
Expense of Condemnation	3,890.95	
Gate House	17,681.00	
		1,611,042.97

THIRTY-SIX INCH SUPPLY PIPE LINE.
Between South Orange and Belleville Reservoir.

Labor	44,353.81	
Iron Pipe and Castings	95,978.19	
Interest on Loan	37,884.77	
Inspecting Pipe	1,000.91	
Carting Pipe	3,729.95	
Right of Way	3,450.00	
Caulking Machine	490.00	
Miscellaneous Material	25,304.90	
Work at Second River and South Orange Ave. and Eighth St.	920.12	
Expenses	2,071.00	
Building Sewer, Township of Bloomfield	1,750.00	
Payment on Contract for Outlet Tunnel	11,777.88	
		228,711.53
Total		$1,839,754.50
Less Hay Sold in 1901		158.00
		$1,839,596.50

Fund for the Construction of a Storage Reservoir

December 31, 1908.

CASH ACCOUNT.

Balance, January 1, 1908.....		$30,298.45
Rents, Real Estate.....	$400.50	400.50
		$30,698.95
Expended for Land in Water Shed....	$29,219.37	
Searching Titles.....	133.44	
		29,352.81
Balance to credit of account with City Treasurer, December 31, 1908....		$1,346.14

Fund for the Construction of a Storage Reservoir

December 31, 1908.

TRIAL BALANCE.

Cash		$1,346.14	
Ivy Hill Property.....		81,828.40	
Belleville Property.....		13,965.35	
Charlotteburgh Property.....		50,670.07	
Land in the Pequannock Water Shed..		28,299.26	
Land Purchased for Pequannock Water Shed in 1908:			
From Chas. A. Day.....	$6,000.00		
" H. E. Brown.....	3,000.00		
" Hiram Utter.....	11,000.00		
" James C. Hallock....	2,569.37		
" Anna M. Holly.....	300.00		
" Arthur VanOrden...	1,850.00		
" Daniel D. Lewis.....	4,500.00		
		29,219.37	
Expense Searching Titles.....		133.44	
			205,462.03
			$205,462.03

REAL ESTATE AND SECURITIES.

Ivy Hill Property, South Orange, N. J.	$81,828.40
Belleville, N. J., Property	13,965.35
Charlotteburgh, N. J., Property	50,670.07
Land in Pequannock Water Shed	28,299.26
Land Purchased for Pequannock Water Shed in 1908	29,219.37
Expense for Seaching	133.44
	$204,115.89
Cash deposited with Comptroller	1,346.14
Total	$205,462.03

WATER SHED EXTENSION FUND FOR 1908.

CASH ACCOUNT.

Bonds issued for Water Shed Extension Fund			$100,000.00
Land Purchased in 1908:			
From W. VanHouten	$6,000.00		
" J. A. Day	12,500.00		
" E. S. Rude and others	7,000.00		
" Margaret J. & Mary E. Shanley	250.00		
" Michael Murphy	3,500.00		
" Martha Morgan	250.00		
		$29,500.00	
Searching Titles		312.95	
			29,812.95
Balance Deposited with City Treasurer December 31, 1908.			$70,187.05

STATEMENT OF OUTSTANDING WATER BONDS, NOVEMBER, 1908.

Date of Acc'nt	Year of Issue	Title	When Due	Amount	Rate of Interest	Yearly Interest	Interest Due	Rate of Sinking Fund	Annual Sinking Fund Payments	Amount in Sinking Fund Nov. 30, 1908
April 21, 1876	1879	Water	1909	$ 100,000.00	5 %	$ 5,000.00	May and Nov.	None		
March 6, 1884	Oct. 1, 1884	"	1914	30,000.00	4 %	1,200.00	April and Oct.	3% City	Pays	$ 31,940.76
March 6, 1884	Feb. 1, 1885	"	1915	200,000.00	4½%	9,000.00	Feb. and Aug.	3% "	"	195,102.30
March 6, 1884	Oct. 31, 1885	"	1915	15,000.00	4½%	675.00	May and Nov.	3% "	"	14,645.95
March 6, 1884	Aug. 1, 1886	"	1916	12,000.00	4 %	480.00	Feb. and Aug.	3% "	"	10,642.51
March 6, 1884	April 1, 1887	"	1917	15,000.00	4 %	600.00	April and Oct.	3% "	"	12,351.99
March 6, 1884	March 1, 1888	"	1918	20,000.00	4½%	900.00	March and Sept.	3% "	"	15,200.76
March 26, 1888	Dec. 29, 1888	"	1908	20,000.00	4 %	800.00	June and Dec.	3% Water Dept.	Pays $ 600.00 *2,076.94	20,000.00
March 26, 1888	Dec. 30, 1890	"	1910	20,000.00	4 %	800.00	June and Dec.	3% "	" 600.00	15,580.94
March 26, 1888	Sept. 15, 1891	"	1911	70,000.00	5 %	3,500.00	March and Dec.	3% "	" 2,100.00	47,988.86
March 26, 1888	Oct. 10, 1892	"	1912	20,000.00	4 %	800.00	April and Oct.	3% "	" 600.00	12,645.20
March 26, 1888	Nov. 15, 1893	"	1913	55,000.00	4 %	2,200.00	May and Nov.	3% "	" 1,650.00	32,228.56
March 26, 1888	Aug. 21, 1895	"	1915	40,000.00	4 %	1,600.00	Feb. and Aug.	3% "	" 1,200.00	19,417.00
March 26, 1888	Oct. 20, 1896	"	1916	40,000.00	4 %	1,600.00	April and Oct.	3% "	" 1,200.00	17,605.25
May 14, 1889	Feb. 1, 1892	Funded Water Debt	1922	2,450,000.00	4 %	98,000.00	Feb. and Aug.	2% "	" 49,000.00	1,082,689.90
May 14, 1889	May 1, 1892	New Water Supply	1922	4,000,000.00	4 %	160,000.00	May and Nov.	2% "	" 80,000.00	
May 14, 1889	Nov. 1, 1900	" " "	1922	2,000,000.00	4 %	80,000.00	May and Nov.	2% "	" 40,000.00	2,051,467.88
May 14, 1889	Aug. 1, 1897	Funded Water Debt	1927	100,000.00	4 %	4,000.00	Feb. and Aug.	2% "	" 2,000.00	26,429.09
May 18, 1889	Oct. 18, 1899	Water	1919	20,000.00	4 %	800.00	Feb. and Aug.	3% "	" 600.00	6,268.32
May 18, 1898	Aug. 1, 1900	Water	1920	20,000.00	4 %	800.00	April and Oct.	3% "	" 600.00	5,481.64
May 18, 1898	Sept. 1, 1901	Water	1921	20,000.00	4 %	800.00	March and Sept.	3% "	" 600.00	4,708.77
May 18, 1898	Oct. 1, 1902	Street Main Extensions	1922	30,000.00	4 %	1,200.00	April and Oct.	3% "	" 900.00	5,989.52
May 18, 1898	July 1, 1903	" " "	1923	30,000.00	4 %	1,200.00	Jan. and July	3% "	" 900.00	5,399.25
1905	Aug. 1, 1904	High Pressure, 30 years	1934	100,000.00	3½%	3,500.00	Feb. and Aug.	2% "	" 2,000.00	8,479.32
1905	April 1, 1905	Cedar Grove Reservoir	1955	1,950,000.00	3½%	68,250.00	April and Oct.	1% "	" 19,500.00	82,673.38
1905	May 1, 1905	Street Main Extensions	1925	50,000.00	4 %	2,000.00	May and Nov.	3% "	" 1,500.00	6,369.40
Renewal 1875	May 1, 1905	Water	1935	490,000.00	3½%	17,150.00	May and Nov.	1% "	" 4,900.00	20,774.33
	Oct. 1, 1898	Vallab'g Water Bonds 15 years	1913	20,000.00	4½%	900.00	April and Oct.	5% "	" 1,000.00	7,335.08
	Oct. 1, 1898	Bond, 30 years	1928	20,000.00	4½%	900.00	April and Oct.	2% "	" 400.00	3,243.56
	Aug. 1, 1908	Land Watershed	1938	100,000.00	4 %	----------	Aug. and Feb.	2%	" --------	----------
	Sept. 1, 1908	High Pressure, 30 years	1938	100,000.00	4 %	----------	Sept. and March	2% "	" --------	----------
	Nov. 16, 1908	Street Main Extension	1928	50,000.00	4 %	----------	Nov. and May	3½% "	" --------	----------
				$12,207,000.00		$468,655.00			$218,926.94	$3,712,559.56

* From income of Water Department.

The Water Department pays both Interest and Sinking Funds on Bonds issued under acts 1875 (Renewal), 1888-1889-1898-1905 and 1908, and interest on Bonds issued under the acts of 1876 and 1884. These payments amounted to a total fixed charge for the year 1908 of $680,505.00.

The bond issued in December, 1888, and due in 1908, amounting to $20,000.00, was paid from the receipts of the water department into the sinking fund, and amounting to $17,923.06—the balance, $2,076.94, was paid by the water department from the income of the Board of 1908.

ANNUAL REPORT

OF THE

Engineer, Department of Streets and Highways

ANNUAL REPORT

OF THE

Engineer, Department of Streets and Highways

MR. MORRIS R. SHERRERD, CHIEF ENGINEER,

Board of Street and Water Commissioners of the City of Newark, N. J.:

DEAR SIR:—The following annual report of the Engineering Division of Street and Highways for the year ending December 31, 1908 is herewith presented, showing the street and highway improvements inaugurated and completed during the year, together with other work appertaining thereto.

STREET IMPROVEMENTS.

NEW PAVING WORK.

No new paving work under Chapter 217 of the State Laws of 1885 (known as the Jersey City Act) was started during the year, although a number of street pavings remaining uncompleted from the previous year were finished during 1908. All of the paving work laid out during 1908 was done under Chapter 290 of the State Laws of 1907, which is an amendment to the old Newark Paving Act known as Chapter 210 of the State Laws of 1895.

REPORT OF DEPT OF STREETS & HIGHWAYS

During the year 31 contracts for pavements were awarded of which 30 were completed, amounting to $435,675.86. There were also 14 contracts completed during 1908 that were awarded during the previous year, viz:—Austin Street, Fourth Street, South Twelfth Street, South Fifteenth Street, Clifton Avenue, Hillside Avenue, Wall Street, Rose Street, Fifth Street, Houston Street, South Tenth Street, Union Street, Nassau Street, Lentz Avenue, the paving of the 14 streets costing $280,837.33. One contract, South Fourteenth Street, was not started amounting to $17,-567.50.

The Amount of paving laid during 1908:

	Act.	Miles.
Brick	210	2.912
Brick	217	3.079
Telford	210	2.502
Telford	217	1.255
Bitulithic	210	1.052
Bitulithic Concrete	210	0.536
Bitulithic Concrete	217	0.350
Granite	210	1.210
Granite	217	0.332
Total		13.228

Mileage of paved streets of Newark, December 31, 1908:

Sheet Asphalt	51.253	miles
Granite Block	56.229	"
Telford	30.305	"
Trap or Belgian Block	11.539	"
Brick	30.349	"
Cobble	6.410	"

Bitulithic	6.787	"
Bituminous Macadam	0.125	"
Wood Block	0.075	"
Bituminous Concrete	0.886	"
Total	193.958	miles.

About 86 miles of paved streets within the city limits.

The amount of paving laid during 1908 was as follows:

Pavement	Base	Act	Miles	Sq. Yds	Cost
Granite Block,	concrete	217	0.332	6,687	$ 24,684.04
Granite Block,	concrete	210	1.210	27,248	96,339.26
Total Granite Block			1.542	33,935	$121,023.30
Brick, concrete		210	2.912	62,123	$179,680.90
Brick, concrete		217	3.079	63,520	178,566.00
Total Brick			5.991	125,643	$358,246.90
Telford		210	2.502	43,838	$ 96,402.61
Telford		217	1.255	19,374	47,934.82
Total Telford			3.757	63,212	$144,337.43
Bitulithic, concrete		210	1.052	18,589	$ 53,467.61
Bit. Concrete, concrete		210	0.536	10,129	$ 25,929.35
Bit. Concrete, concrete		217	0.350	3,884	13,508.60
Total Bituminous Concrete			0.886	14,013	$ 39,437.95

Paving under Acts 210 *and* 217, *Laws of* 1895.

Paving under Act 210—		
8.212 miles	161,927 sq. yds.	$451,819.73
Paving under Act 217—		
5.016 miles	93,465 sq. yds.	$264,693.46
Total..13.228 miles	255,392 sq. yds.	$716,513.19

COST OF INSPECTION.

The amount paid to inspectors on street paving work completed during 1908 was $11,174.00, making an additional cost of $0.0411 per square yard or 1.53 per cent of the contract cost.

COST OF INSPECTION.

STREET PAVING, 1908.

		Sq. Yds.	Cost as per Est.	Cost of Inspection
1.	Austin St., Brick.....	3,590	$11,622.19	$192.50
2.	Badger Ave., Granite.....	10,310	35,711.10	479.50
3.	Beecher St., Brick.....	1,474	4,048.08	122.50
4.	Belmont Ave., Brick.....	10,469	28,915.78	406.00
5.	Boyd St., Granite.....	1,868	6,855.22	168.00
6.	Brill St., Brick.....	8,403	24,561.08	441.00
7.	Clifton Ave., Brick.....	8,128	20,958.56	161.00
8.	Elizabeth Ave., Telford....	2,011	4,093.15	31.50
9.	18th Ave., Brick.....	11,766	34,122.49	367.50
10.	Essex St., Brick.....	1,595	5,191.27	63.00
11.	5th St., Brick.....	13,37[illegible]	38,551.34	644.00
12.	4th St., Brick.....	6,458	19,512.46	208.25
13.	Garden St., Bit. Con.....	2,16[illegible]	5,710.39	80.50
14.	George St., Bitulithic.....	2,23[illegible]	6,866.75	175.00
15.	Heller Parkway, Granite...	2,787	10,528.40	168.00
16.	Heller Parkway, Telford...	9,028	18,051.50	255.50
17.	Hermon St., Bitulithic....	[illegible]	12,179.99	190.75
18.	Hillside Ave., Brick.....	7,9[illegible]8	20,823.04	365.75
19.	Houston St., Brick.....	3,3[illegible]	16,496.06	101.50
20.	Hudson St., Brick, 703.50-287.00-416.50.....	7,888	23,221.15	416.50
21.	Komorn St., Bitulithic....	[illegible]	19,602.46	252.00
22.	Lentz Ave., Brick.....	4,70[illegible]	12,449.39	189.00
23.	Lockwood St., Granite, 514.50-45.50-169.....	7,60[illegible]	26,571.20	469.00
24.	Market St., Granite.....	2,[illegible]	10,443.75	150.50
25.	Nassau St., Brick.....	[illegible]	8,809.48	108.50
26.	Nicholas St., Bitulithic....	[illegible]	14,818.41	161.00
27.	No. 13th St., Bit. Con.....	3,234	8,193.18	94.50

		Sq. Yds.	Cost as per Est.	Cost for Inspection
28.	No. 14th St., Gran., 255.50-14-241.50	1,752	6,229.59	241.50
29.	Parker St., Telford.....	8,110	13,947.82	339.50
30.	Peshine Ave., Brick.....	5,322	14,379.97	322.00
31.	Ridge St., Telford.....	10,493	18,526.36	299.50
32.	Rose St., Granite.....	6,687	24,684.04	222.25
33.	Seymour Avenue, Telford, 409.50-210.00-199.50	5,250	9,985.74	199.50
34.	Shanley Avenue, Telford, 507.50-77.00-430.50	5,281	9,818.14	430.50
35.	So. 8th St., Brick.....	4,685	14,151.33	315.00
36.	So. 10th St., Telford.....	11,306	22,629.06	203.00
37.	So. 11th St., Telford, 628.25-70.00-558.25	11,754	20,500.68	558.25
38.	So. 12th St., Brick.....	14,244	37,442.12	465.50
39.	So. 15th St., Telford.....	12,477	25,305.76	217.00
40.	Springdale Ave., bit. con...	4,735	12,025.78	252.00
41.	Sussex Ave., Telford.....	1,148	1,479.22	42.00
42.	Union St., Bituminous Con.	3,884	13,508.60	183.75
43.	Wall St., Brick.....	4,476	13,160.23	157.50
44.	Winans Ave., Brick.....	5,079	14,945.88	262.50

Inspection per yard, .0411.
Inspection per cent, .0153.

GRADING, CURBING AND FLAGGING.

During 1908, fifteen contracts for grading, curbing and flagging were awarded, of which fourteen were completed and seventeen contracts carried over from 1907, owing to the inability of the various contractors to secure sufficient quantities of curb and five-foot flagging during the working season of 1907, were also completed during 1908. Streets awarded during 1907 and completed during 1908 at a cost of $66,643.02 are as follows:

Alpine Street,	Frelinghuysen Ave.—Elizabeth Ave.
Bragaw Avenue,	Clinton Place—Schley Street,
Calumet Street,	Pacific Street—Jefferson Street,
Elizabeth Avenue,	Peddie Street—City Line,

Gold Street,	Jacob Street—Blum Street,
Hunterdon Street,	Hawthorne Avenue—100 ft north of Renner Avenue,
Hunter Street,	Elizabeth Ave.—Sherman Ave.,
Jelliff Avenue,	Runyon Street—Peddie Street,
Lentz Avenue,	Horatio Street—Plum Point Lane,
Nye Avenue,	Clinton Place—City Line,
Passaic Avenue,	Chapel Street—Ferry Street,
Peddie Street,	Penn. Railroad—Hunterdon Street,
Schley Street,	Hawthorne Avenue—Lyons Avenue,
Shaw Avenue,	Willoughby Street—City Line,
Willoughby Street,	St. James Place—Bragaw Avenue,
Wainwright Street,	Hawthorne Avenue—Lyons Avenue,
Weston Avenue,	Frelinghuysen Ave.—Penna. Railroad.

Streets awarded and completed during 1908 comprise a mileage of 4.794 and at a cost of $88,820.96, are as follows:

Clifton Avenue,	Grafton Avenue—Verona Avenue,
Custer Avenue,	Seymour Avenue—Peshine Avenue,
Edmonds Place,	Clinton Place—Demarest Street,
East Kinney Street,	Van Buren Street—Elm Road,
Fifth Street,	Bloomfield Avenue—Chester Avenue,
Fourteenth Avenue,	Devine Street—City Line,
Grant Avenue,	Hunterdon Street—Peshine Avenue,
Johnson Avenue,	Watson Ave.—218 feet northerly,
Nineteenth Avenue,	Springfield Avenue—City Line,
No. Twelfth Street,	Sixth Avenue—Seventh Avenue,
Renner Avenue,	Osborne Terrace—Clinton Place,
Runyon Street,	Johnson Avenue—Osborne Terrace,
So. Sixteenth Street,	South Orange Ave.—Sixteenth Ave., Madison Avenue—Eighteenth Ave.
So. Twentieth Street,	Springfield Ave.—Sixteenth Ave.

The contract for North Sixth Street from Bloomfield Avenue to Heller Parkway was awarded during 1908, but not completed owing to the heavy embankment, making it desirable to defer the setting of the curb and flagging.

During the year 1908 there were 3 contracts for flagging, costing $4,880.40 as follows:

Ferry Street,	Lentz Avenue—Blanchard Street,
Mt. Prospect Avenue,	Heller Parkway—Grafton Avenue,
Summer Place	May Street—Chester Avenue.

STREET OPENINGS, 1908.

	From To
Aldine Street,	Bragaw Avenue—Clinton Place.
Bigelow Street,	Chadwick Avenue—Seymour Avenue.
Clifford Street,	Jefferson Street—Adams Street.
Dewey Street,	Shaw Avenue—Lyons Avenue.
Devine Street,	14th Avenue—South Orange Avenue.
Fourth Street,	Park Avenue—6th Avenue.
Leslie Street,	Shaw Avenue—Lyons Avenue.
Millbrook Place,	Summer Avenue—Sheffield Street.
North 13th Street,	Park Avenue—4th Avenue.
North 7th Street,	862 ft. No. of Park Avenue—Bloomfield Avenue.
North 6th Street,	862 ft. No. of Park Avenue—Bloomfield Avenue.
Runyon Street,	Sherman Avenue—Elizabeth Avenue.
Voorhees Street,	330 ft. west of Leslie Street—Fabyan Place.
McClellan Street,	Frelinghuysen Avenue — Pennsylvania Railroad.

14 openings.

STREETS VACATED IN 1908.

	From To
Devine Street,	So. Orange Avenue, southerly 525 feet.
Lake Street,	Mt. Prospect Avenue—First Street.
Morris Street,	Mt. Prospect Avenue—First Street.
New York Avenue,	Triangle at New Jersey Railroad Avenue.
Passaic Street,	Mt. Prospect Avenue—First Street.
Willett Street,	Parkhurst Street—Tompkins Point Road.

6 vacations.

MISCELLANEOUS.

ASPHALT REPAIRS AND RESURFACING.

During the year the wearing surface on South Seventh Street from Twelfth Avenue to Eleventh Avenue, on Third Avenue from Belleville Avenue to Mt. Prospect Avenue, Third Street from Orange Street to Sixth Avenue and Mt. Prospect Avenue from Bloomfield Avenue to Park Avenue was renewed. The original pavement was laid in 1898 by the New Jersey Asphalt Company. The work of renewal was done by the Standard Bitulithic Company. The price paid per square yard was $1.23 for 14,458 square yards, amounting with extras to $17,979.38. Repairs were made on thirty-two asphalt streets by the same Company, the yardage amounting to 7,868.33 square yards, at $1.23 per square yard, amounting with extras to $9,958.10. This work was done under a one year guarantee.

MISCELLANEOUS SURVEYS.

In addition to the regular Field and Office work of this Department, the following surveys and maps were made for public departments not under the jurisdiction of the Board of Street and Water Commissioners:

Play Ground Commission.....1
Building Department, Encroachment Surveys...3
Fire Department, Engine House Surveys.....3

STREET RAILWAY WORK.

During 1908 the North Jersey Street Railway Company relaid with heavy rails on a stone foundation and repaved their tracks with either wood block or granite block on the following streets:

Union Street, Market Street to Elm Street..	2,700	ft. single track
Ferry Street, Union Street to Hamburg Place	5,400	" "
Elizabeth Avenue, Hawthorne Avenue to Peddie Street.....	1,600	" "
Warren Street, Roseville Avenue, So. 11th Street	1.800	" "
Broad Street, Lackawanna Bridge, Belleville Avenue	4,420	" "
Belleville Avenue, Broad Street, Bloomfield Avenue		
Total, 3.015 miles	15,920	ft. single track
1.508 miles	7,960	ft. double track

In addition to the above work, the alingnment of the tracks on Springfield Avenue was changed from South Orange Avenue to Market Street, the tracks at certain points being moved northerly about seven feet. The old rails were retained, but new ties and new stone ballast were used and the tracks repaved with granite on concrete. This work amounted to 1900 lineal feet of single track or 950 feet of double track.

TESTS OF PAVING MATERIAL.

1908 was a very busy year for our Department of Tests under Dr. Goslau, Chemist to the Board of Works. In addition to the immense amount of work he handled for our Department, he was kept busy with much work for the Water and Sewer Departments. Abrasion tests were made of 567 bricks, representing 63 different sets of material of which 18 sets failed to pass. Breaking tests were made of 146 bricks and Absorption Tests were made of 347 samples. The following list comprises the makes of the brick tested:

Bessemer Block,	McAvoy Block,
Reynoldsville Block,	Saxton Block,
Kushequa Block,	Conneaut Block,
Metropolitan Block,	Johnsonburg Block,

Corning Block,	R. B. F. Co.,
Jamestown Block,	Bolens Block.
Townsend Block,	

Cement tests were made as follows:

Saylor	Brand,	8	samples	tested.
Edison	"	8	"	"
Phoenix	"	2	"	"
Alpha	"	3	"	"
Dexter	"	9	"	"
Grant	"	1	"	"
Penn Allen	"	4	"	"
Lehigh	"	2	"	"
Bath	"	4	"	"
Nazareth	"	2	"	"
Clover Leaf	"	1	"	"
Misc'l'eous	"	3	"	"

Total 47 samples tested, of which 9 failed to pass.

Fifty samples of asphaltic material were tested, six samples of Bitulithic; and six samples of wood block were also tested. The wood block submitted to the Department for testing comprising the following makes:

American,	United States,
Republic,	Wyckoff.

It is hoped that within the next few weeks we will have our own machines for abrasion and cross breaking installed in the basement of the New City Hall Annex.

During the year no extensive repairs were made to either of the three municipal bath houses, but a site for a fourth public bath was acquired by purchase of property on Clayton Street in the heart of a congested tenement house district. The property in question, numbers 17, 19 and 21 Clayton Street, respresents a frontage on Clayton Street of 75 feet,

which will afford an opportunity for the erection of a substantial building. The cost of the site was $4,400.00. Negotiations are also under way for the acquisition by the City of additional land to afford a much needed enlargement of the Walnut Street Bath House.

The official staff of the Department on January 1st, 1909, was made up as follows:

Charles A. Stilger.....Principal Assistant Engineer
George C. Brandley.....Principal Office Assistant
Walter W. Kane.....Engineer of Construction
David M. Crabb.....Assistant Engineer
Arthur H. Bradley.....Assistant Engineer
Monkton Mitchell..... Transitman
Clifford L. Landmesser.....Transitman
Arthur Finn .....Rodman
Justus Goslau, M. D.....Chemist
William G. Dassing.....Stenographer

Messrs. Brandley and Dassing are attached to both sewer and street departments.

The writer desires to take this occasion to testify to the loyal and efficient support of the members of the official staff of the Department, giving especial credit to Messrs. Stilger, Kane and Bradley, without whose untiring efforts the good record achieved by the official force during the year 1908 could not have been accomplished.

Respectfully submitted,

WILLIAM A. HOWELL,
Engineer, Streets and Highways.

Item Number	Description	Contractor of Work Letting Bid	Time of Final Payment	Expiration Date of Guarantee	REMARKS
1	[illegible] Paving Co.	Contract	June, 20, 1908	June, 20, 1908	
2	[illegible]	Contract	Dec. 20, 1908	Dec. 20, 1908	
3	[illegible] Paving Co.	Contract	July, 21, 1908	July, 21, 1909	
4	[illegible] & Son	Contract	Aug. 27, 1908	Aug. 27, 1910	
5	[illegible]	Contract	Aug. 21, 1908	Aug. 21, 1909	
6	[illegible]	Contract	Nov. 20, 1908	Nov. 20, 1909	
7	[illegible] Paving Co.	Contract	May 20, 1908	May 20, 1910	
8	[illegible] Paving Co.	Contract	July, 21, 1908	July, 21, 1909	
9	[illegible] Paving Co.	Contract	Oct. 27, 1908	Oct. 27, 1910	
10	[illegible] Paving Co.	Contract	Oct. 20, 1908	Oct. 20, 1909	
11	[illegible] Paving Co.	Contract	July 22, 1908	July 22, 1910	
12	[illegible]				
13	[illegible] & Son	Y Tyler	June, 22, 1908	June, 22, 1909	
14	[illegible] & Tyler Improvement	Y Tyler	Sept. 20, 1908	Sept. 20, 1909	
15	[illegible] & Tyler Improvement	Y Tyler	Oct. 28, 1908	Oct. 28, 1910	
16	[illegible] & Tyler Improvement	Y Tyler	Nov. 28, 1908	Nov. 28, 1910	
17	[illegible] Roofing	Y Tyler	Nov. 20, 1908	Nov. 20, 1910	
18	[illegible]	Y Tyler	Nov. 20, 1908	Nov. 20, 1910	
19	[illegible] & Son	Y Tyler	Aug. 20, 1908	Aug. 20, 1909	
20	[illegible] W. Meader	Y Tyler	July 27, 1908	July 27, 1910	
21					
22	[illegible] Improvement Co.	Contract	Aug. 21, 1908	Aug. 21, 1910	
23	[illegible] Improvement Co.	Contract	Sept. 20, 1908	Sept. 20, 1910	
24	[illegible] Improvement Co.	Contract	Aug. 21, 1908	Aug. 21, 1910	
25	[illegible] Improvement Co.	Contract	Sept. 20, 1908	Sept. 20, 1910	
26					
27	[illegible] Paving Co.	Contract	Aug. 21, 1908	Aug. 21, 1910	
28	[illegible] Paving Co.	Contract	Aug. 21, 1908	Aug. 21, 1910	
29	[illegible] Paving Co.	Contract	Sept. 20, 1908	Sept. 20, 1910	
30					
31	[illegible] & Son	Contract	Nov. 20, 1908	Nov. 20, 1910	
32	[illegible] Paving Co.	Contract	July 22, 1908	July 22, 1910	
33	[illegible] & Tyler Improvement	Contract	Aug. 21, 1908	Aug. 21, 1910	
34	[illegible] Paving Co.	Contract	Dec. 20, 1908	Dec. 20, 1910	
35	[illegible] Paving Co.	Contract	July 22, 1908	July 22, 1910	
36	[illegible] Paving Co.	Contract	Nov. 20, 1908	Nov. 20, 1910	
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Time Allowed	Contractor	Date of Form defining Land	Date of Final Estimate	Expiration of Time for Guarantee	Staff	REMARKS

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[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	Contractor	Date of Plan Approval	Remarks
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]

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ASTOR, LENOX AND
TILDEN FOUNDATIONS

ANNUAL REPORT

OF THE

Engineer, Department of Sewers and Drainage

ANNUAL REPORT

OF THE

Engineer, Department of Sewers and Drainage

MR. MORRIS R. SHERRERD, CHIEF ENGINEER,

Board of Street and Water Commissioners of the City of Newark, N. J.:

DEAR SIR:—Herewith is submitted the report of the work done under my direction by the Department of Sewers and Drainage for the year ending December 31st, 1908:

PUBLIC SEWERS.

During the year 21 contracts were awarded for public sewers. The final estimates on three of these contracts were not paid, the work not being entirely finished at the close of the year. Owing to a delay in furnishing part of the machinery for the pumping station, the estimate on the Meadow Brook Sewer System, Section 1, was also held back, although the work was practically completed and the sewers in use. This delay also prevented the completion of the second section. The total length of sewers built during the year was 46,974 lineal feet, together with 46 basins, 255 manholes and 3 flush tanks. Forty-four basins and 7 manholes were built under paving and grading contracts, and 6 basins and 2 manholes by the Department out of the Sewer and Drainage Account. The total amount paid on the contract work was $181,215.76.

The most important work of the year was done on the Meadow Brook Sewer System, providing in separate systems for the sewage and surface drainage of the valley lying west of Roseville Avenue and extending from Springdale Avenue to the Old Bloomfield Road. The surface water system extends south as far as Park Avenue, in order to receive the overflow from the old culvert in South Thirteenth Street, which terminated at this point, and discharges into Meadow Brook at a point on North Ninth Street midway between Delavan Avenue and Elwood Avenue. As there was not sufficient depth for the usual form of arch construction, it was necessary to resort to a flat top with an eight foot span for nearly its entire length. Reinforced concrete was used throughout and proved very satisfactory. The entire work costing nearly $100,000 was entirely completed in seven months. The sanitary sewers, Sections 1 and 2, terminate at the pumping station on North Sixth Street near the Old Bloomfield Road, where the sewage will be pumped into the Forest Hill system. The total cost of the three sections complete will slightly exceed $200,000.

The old brick sewer in Nutria Street, built in 1858, was found to be in such a dangerous condition that it was torn out and replaced by an eighteen inch pipe.

The amount paid to inspectors on public sewers was $4,210.50, or .023% of the total cost.

See table 1 for complete statement of all public sewers built in 1908.

PRIVATE SEWERS.

By resolution of the Board nine sewers were built under the direction of this Department by private contract. The total length of these private sewers was 2,362 feet, and in connection with them 12 manholes were built. A tabular statement (table No. 2) of the private sewers is appended.

The following shows the total length and cost of all sewers and appurtenances in the city.

Totals to January 1st, 1908, as per report for 1907.

Material.	Lineal feet.	Miles.
Brick and concrete	396,078	75.01
Pipe (public)	781,227	147.96
Pipe (private)	160,167	30.33
	1,337,472	253.30
Catch basins	3,251	
Manholes	7,184	
Flush tanks	100	
Total cost (public sewer contracts only)	$4,734,910.02	

CONSTRUCTED IN 1908.

Material.	Lineal feet.	Miles.
Brick and concrete	7,568	1.43
Pipe (public)	39,406	7.46
Pipe (private)	2,362	0.45
	49,336	9.34
Catch basins	96	
Manholes	276	
Flush tanks	3	
Total cost (public sewer contracts only)	$181,215.76	

TOTAL TO JANUARY 1ST, 1909.

Material.	Lineal feet.	Miles.
Brick and concrete	403,646	76.45
Pipe (public)	820,633	155.42
Pipe (private)	162,529	30.78
Totals	1,386,808	262.65
Catch basins	3,347	
Manholes	7,460	
Flush tanks	103	

Total cost (public sewer contracts only).....$4,916,125.78

Of the above total 304,430 feet, or 57.66 miles, is designed for house sewage only, 26,605 feet, or 5.03 miles for storm water only, and the balance, 1,055,773 feet, or 199.96 miles, is for sewage and storm water combined.

HOUSE CONNECTIONS.

On all sewers built during the year, house connections were laid to the curb lines for each lot under the provisions of Chapter 107 of the State Laws of 1896. In this way 36,426 feet were laid. (See table 1).

In accordance with the ordinance of 1907 all house connections on old sewers have been laid by this Department. This includes connections for new buildings, formerly laid by plumbers, and connections for all vacant lots in advance of new pavements. In the former class 870 connections were laid aggregating 16,446 lineal feet, and in the latter 1025 connections with a total length of 21,040 feet (see table 3), making a total length for the year of all house connections of 73,912 feet. Up to January 1st, 1908, there had been laid as previously reported 107,817 feet, making a grand total of 181,729 feet or more than 34 miles. This of course does not include connections laid by plumbers previous to 1907, no record being kept of the length of these.

The records show a total of 41,007 taps in the City, 1251 of which were made during 1908.

FINANCIAL STATEMENT.

HOUSE CONNECTION DEPARTMENT.

RECEIPTS.

Balance 1907 .....$1,075.52
Appropriation (Tax Ordinance) 1908, 8,000.00
Service Construction (work formerly done by plumbers).....17,041.07

Improvement Account (work done under laws of 1896)	184.06	
Improvement Account (collected through Comptroller's Office under laws of 1907)	11,319.49	
		$37,620.14

DISBURSEMENTS.

Drugs, etc.	Stables	$ 4.75	
Purchase of two horses	"	500.00	
Horse and wagon hire	"	294.71	
Veterinary services	"	15.00	
Coal, stores, etc.	"	19.30	
Wagons and wagon repairs	"	541.15	
Harness and harness repairs	"	159.95	
Rent	"	307.50	
Electric light	"	15.29	
Provender	"	429.75	
Horse shoeing	"	105.25	
			$ 2,392.65
Printing and stationery, office		185.60	
Material, pipe, etc.		5,499.21	
Lumber		314.24	
Tools		556.01	
Paints and Oils		83.14	
Disinfectant		58.88	
Rubber goods, hose, etc.		96.10	
Telephone		15.90	
Repairs (per bills Water Dept.)		9.35	
Advertising		102.10	
Badges, Foreman and Inspectors		10.25	
Incidentals		366.09	
Refund		138.00	
			$ 7,434.87

PAY ROLLS.

January	$ 42.00	
February	335.14	
March	934.90	
April	2,915.96	
May	2,953.40	
June	2,140.20	
July	1,639.40	
August	1,324.85	
September	1,385.80	
October	1,616.99	
November	1,020.63	
December	1,250.05	
		$17,559.32
Balance		10,233.30
		$37,620.14

DISTRIBUTION OF PAY ROLLS AND BILLS.
HOUSE SEWER CONNECTIONS.

1908	Service Construction			Improvement			Total
	Bills	Pay R'ls	Total	Bills	Pay R'ls	Total	
January	$ 435.74		$ 435.74		$ 42.00	$ 42.00	$ 477.74
February	364.98	$ 335.14	700.12				700.12
March	377.00	750.87	1,127.87	$ 833.42	184.03	1,017.45	2,145.32
April	361.57	1,052.64	1,414.21	729.48	1,863.32	2,592.80	4,007.01
May	390.55	833.68	1,224.17	889.86	2,119.78	3,009.64	4,223.81
June	364.54	654.13	1,018.67	742.17	1,486.07	2,228.24	3,246.91
July	388.76	942.30	1,331.06	442.11	697.10	1,139.21	2,470.27
August	324.14	849.62	1,173.76	92.53	475.23	567.76	1,741.52
September	417.82	566.20	984.02	482.95	819.60	1,302.55	2,286.57
October	578.48	633.19	1,211.67	310.68	983.80	1,294.48	2,506.15
November	690.58	810.06	1,500.64	50.56	210.57	261.13	1,761.77
December	433.56	822.40	1,255.96	126.04	427.65	553.69	1,809.65
Totals	$5,127.72	$8,250.17	$13,377.89	$4,699.80	$9,309.15	$14,008.95	$27,386.84

DEPARTMENT OF SEWERS AND DRAINAGE.

January	$ 334.08	$ 490.83	$ 824.91
Total disbursements			$28,211.78

The following moneys were collected through this office and credited to the several departments as follows:

1908	Sewers and Drainag		House Sewer Connections		Streets and Highw's	Repairs to Asphalt Streets	Total
	Sewer Taps	Priv't Sewers	Service Instr'tn	Curb Conn.	Street Opening	Street Opening	
January	$ 670.00	-------	$ 553.81	-------	$ 38.00	$ 150.00	$ 1,411.81
February	1,010.00	-------	908.55	-------	144.00	135.00	2,192.55
March	1,060.00	-------	1,132.63	$ 6.44	191.00	225.00	2,615.07
April	1,450.00	-------	1,632.61	5.30	310.00	315.00	3,712.91
May	1,220.00	-------	1,553.44	9.60	301.50	120.00	3,204.54
June	1,430.00	-------	2,061.61	26.81	394.00	251.00	4,163.42
July	1,280.00	-------	1,809.43	29.31	326.00	170.00	3,614.74
August	1,370.00	-------	1,418.63	41.08	195.00	187.00	3,211.71
September	1,180.00	-------	1,430.63	14.24	219.00	157.50	3,001.37
October	1,130.00	-------	1,446.35	7.12	356.00	165.00	3,104.47
November	1,430.00	-------	1,685.90	16.70	380.00	220.00	3,732.60
December	1,430.00	$137.12	1,412.48	27.46	174.00	142.00	3,323.06
Total	$14,660.00	$137.12	$17,041.07	$184.06	$3,028.50	$2,227.50	$37,288.25

There still remains to the credit of the Improvement Account the sum of $5,956.54 as per charges for curb connections made under the Act of 1896 but this amount is not available as under the provisions of the law payments are made only when actual connections are made. Estimating on former payments not more than 5% of the amount ($297.83) can be expected for 1909.

There is also a balance of $2,470.42 due the Improvement Account on assessments filed with the Comptroller's Department under the Act of 1907, the provisions of which insure compulsory payments. This amount almost in entirety will be available from time to time during the coming year.

The addition of these amounts to balance gives this Department a working balance for 1909, as follows:

Estimated receipts, Act of 1896	$ 297.83
Estimated receipts, Act of 1907	2,400.00
Balance 1908	10,233.30
Total	$ 12,931.13

EAST ORANGE OUTLET SEWER.

The contract between this City and East Orange provides for the discharge into the Newark Sewer of not to exceed 4,000,000 gallons of sewage per day and no storm water whatever. In order to determine whether this allotted amount was being exceeded, gagings were taken on three separate days, the velocity and depth of flow being measured each hour throughout the 24. The gaging was done on April 30th, on which day there was a shower with a total rainfall of one inch, the second on June 11th and the third on Monday, June 22nd. On neither of these latter days was there any rain and had been none for a week previous. Still a fourth gaging was made during the heavy storm of May 7th and 8th when the sewer was under head for three days. This was made by taking the capacity of a 24 inch pipe running full with a grade equal to the slope shown by the level of the water in the manholes at each end of the line. The results show a flow for 24 hours as follows:

On April 30th, of	4,664,952	gallons.
On June 11th, of	4,541,476	"
On June 22nd, of	5,099,556	"
On May 7th, of	9,312,320	"

showing that both the allotted amount was being exceeded and that a large amount of storm water entered the sewer. As a matter of interest the hourly flow on April 30, June 11 and 22 is shown on Diagram C.

INTERCEPTING SEWER.

The usual diagram (A) showing the quantity of sewage pumped each day from the Intercepting Sewer is appended to this report. It will be noted that on May 7th the quantity pumped exceeded 30,000,000 gallons, which is supposed to be the limit of capacity of the pumps. Great care must be taken to exclude as far as possible all surface water from the main sewer and branches in order to prevent the necessity of installing additional pumps.

CONDENSED STATEMENT FOR THE YEAR 1908.

Total quantity pumped during year...	4,780,780,230	gallons
Maximum pumped per day, May 7th..	30,285,656	"
Minimum pumped per day, Aug. 24th.	5,674,144	"
Average pumped per day, 1908.....	13,062,241	"
Average pumped per day, 1907.....	12,388,864	"
Coal consumed	1,670,637	lbs.
Ashes removed	331,852	"

Diagram B shows the quantity of sewage pumped each year since the station was put in operation. The figures are obtained by multiplying the capacity of the cylinders by the number of strokes of the piston, with an allowance of 8 per cent. for slip. As the valves and other parts become worn out the percentage of slip increases so that the number of strokes, which are automatically counted, do not measure the exact volume pumped. Any repairs made to the pumps would increase their efficiency and show an apparent decrease in the quantity pumped as is the case in the years 1906 and 1907, when extensive repairs were made.

RAINFALL OBSERVATIONS.

The daily meteorological reports in detail as furnished by Professor William Wiener will be found at the end of this report. The monthly precipitation for the past ten years is given below:

TABLE SHOWING PRECIPITATION IN INCHES FOR YEARS 1899-1908.

YEAR	1899	1900	1901	1902	1903	1904	1905	1906	1907	1908
January	4.99	3.69	1.67	2.64	4.26	3.27	3.67	2.79	4.94	4.51
February	5.37	5.82	0.69	5.35	4.59	2.67	2.13	1.77	3.27	3.95
March	6.62	3.14	4.70	4.96	4.08	3.56	3.80	4.98	4.14	2.14
April	1.76	2.20	6.56	3.75	3.14	4.71	2.49	5.68	6.33	2.27
May	1.63	1.23	5.96	1.54	0.42	2.93	1.25	4.77	6.45	9.01
June	1.06	2.96	1.07	7.10	11.50	3.00	3.02	2.62	4.37	4.17
July	4.70	6.17	4.89	3.04	4.27	5.36	6.27	3.71	0.95	6.30
August	4.90	2.94	11.94	2.09	14.54	7.46	4.74	2.52	3.22	7.74
September	6.18	3.30	1.63	5.05	4.56	4.19	6.21	3.53	10.07	1.69
October	2.54	4.40	2.14	6.65	13.26	4.16	2.91	4.23	6.07	2.10
November	1.78	4.69	1.61	1.12	0.92	1.85	2.08	1.37	5.02	0.35
December	2.32	1.75	7.58	7.37	3.56	2.87	3.23	6.17	4.88	3.16
Totals	43.85	42.29	50.44	50.48	69.10	46.03	41.75	44.14	59.71	47.43

The heaviest fall of the year was on August 26th with a total precipitation of 3.99 inches. A maximum of one-half inch in five minutes, .90 of an inch in 10 minutes and 2.40 inches in one hour was recorded on July 23rd.

The field and office force for the year consisted of

JOHN A. SCHIECK, Principal Assistant Engineer.
JAMES B. BURNETT, JR., Engineer of Construction.
GOLINE DOREMUS, First Assistant Engineer.
ARTHUR ROEDER, Rodman.
JAMES CONWAY, Helper.

And in the House Sewer Connection Department

HARRY D. FRANKLIN, Engineer.
OTTO HORNICH, Head-Bookkeeper.
JOSEPH REILLY, Clerk.

Respectfully submitted,

EDWARD S. RANKIN,
Engineer, Sewers and Drainage.

HOUSE CONNECTIONS LAID TO CURB BY CITY IN ADVANCE OF NEW PAVEMENTS.

TABLE 3.

STREET	LOCATION	Number of Connect'ns	Length in feet	Cost per foot	Total Cost	Assessed to Property
Nassau St.	Sheffield St. to Nesbit St.	1	18	.80	$ 90.56	$ 99.62
		6	112	.68	--------	--------
South Fifteenth St.	Eighteenth Ave. to Clinton Ave.	66	1,182	.52	614.64	676.34
South Twelfth St.	South Orange Ave. to Springfield Ave.	103	1,936	.68	1,316.62	1,447.81
Union St.	Market St. to Ferry St.	6	128	.44	56.32	61.49
Heller Parkway	Forest Hill Parkway to Summer Ave.	54	1,118	.56	626.08	688.46
Seymour Ave.	Avon Ave. to Clinton Ave.	45	1,000	.52	520.00	572.23
South Eighth St.	Fifteenth Ave. to Sixteenth Ave.	1	8	.94	--------	--------
		1	30	.68	27.92	30.71
Shanley Ave.	Avon Ave. to Clinton Ave.	33	708	.52	361.16	404.89
Eighteenth Ave.	Springfield Ave. to City Line	65	1,216	.57	--------	--------
		1	20	No charge	733.12	806.48
Brill St.	Passaic Ave. to Bonykamper Ave.	57	1,132	.51	577.32	629.70
Napoleon St.	Elm Road to Hamburg Pl.	31	502	.46	230.92	254.13
Winans Ave.	Eighteenth Ave. to Bergen St.	9	162	.67	108.54	119.43
Belmont Ave.	Clinton Ave. to Runyon St.	14	308	.51	157.08	172.76
Peshine Ave.	Runyon St. to Hawthorne Ave.	34	708	.67	474.36	521.74
South Eleventh St.	Springfield Ave. to Clinton Ave.	99	1,818	.52	945.36	1,040.25
Hudson St.	Sussex Ave. to Warren St.	18	402	.54	225.83	248.36
Parker St.	Elwood Ave. to Montclair Ave.	26	490	.65	318.50	350.35
Komorn St.	Hamburg Pl. to St. Charles St.	17	276	.52	143.52	157.85
Ridge St.	Delavan Ave. to Montclair Ave.	36	668	.60	400.80	440.88
Hermon St.	Johnson St. to Thomas St.	9	164	.58	95.12	104.61
Springdale Ave.	Roseville Ave. to City Line	9	158	1.50	--------	--------
		27	318	.68	458.10	503.35
So. Fourteenth St.	Orange St. to Seventh Ave.	31	496	.90	446.40	491.04
Hill St.	Broad St. to Washington St	8	240	.66	--------	--------
		3	16	.80	201.86	219.18
So. Fourteenth St.	Orange St. to Central Ave.	5	198	.68	136.26	149.71
Mt. Prospect Ave.	Elwood Ave to Verona Ave	108	3,526	.56	1,974.56	2,171.32
Essex St.	Orange St. to James St.	4	60	1.00	66.00	72.00
Beecher St.	West Kinney St. to Halsey St.	5	72	.91	65.52	72.06
Pierce St.	Springfield Ave. to South Fourteenth St.	30	554	.61	337.94	371.58
South Sixteenth St.	Avon Ave. to Clinton Ave.	27	504	.64	322.56	354.78
Hunterdon St.	Bigelow St. to Hawthorne Ave. (not completed)	36	792	.67	520.04	572.96
Totals		1,025	21,040		$12,560.01	$13,806.01

TABLE SHOWING PRECIPITATION IN INCHES FOR YEARS 1899-1908.

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March	6.62	3.14	4.70	4.96	4.08	3.56	3.80	4.98	4.14	2.14
April	1.76	2.20	6.56	3.75	3.14	4.71	2.49	5.68	6.33	2.27
May	1.63	1.23	5.96	1.54	0.42	2.93	1.25	4.77	6.45	9.01
June	1.06	2.96	1.07	7.10	11.50	3.00	3.02	2.62	4.37	4.17
July	4.70	6.17	4.89	3.04	4.27	5.36	6.27	3.71	0.95	6.30
August	4.90	2.94	11.94	2.09	14.54	7.46	4.74	2.52	3.22	7.74
September	6.18	3.30	1.63	5.05	4.56	4.19	6.21	3.53	10.07	1.69
October	2.54	4.40	2.14	6.65	13.26	4.16	2.91	4.23	6.07	2.10
November	1.78	4.69	1.61	1.12	0.92	1.85	2.03	1.37	5.02	0.38
December	2.32	1.75	7.58	7.37	3.56	2.87	3.23	6.17	4.88	3.16
Totals	43.85	42.29	50.44	50.48	69.10	46.03	41.75	44.14	59.71	47.43

The heaviest fall of the year was on August 26th with a total precipitation of 3.99 inches. A maximum of one-half inch in five minutes, .90 of an inch in 10 minutes and 2.40 inches in one hour was recorded on July 23rd.

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HARRY D. FRANKLIN, Engineer.
OTTO HORNICH, Head-Bookkeeper.
JOSEPH REILLY, Clerk.

Respectfully submitted,

EDWARD S. RANKIN,
Engineer, Sewers and Drainage.

MONTHLY REPORT OF PRECIPITATION (Rain and Melted Snow)

As observed at Newark Public High School, by Prof. William Wiener, with U. S. Gov. Rain Gauge.

FEBRUARY, 1908. Elevation of gauge above sea level, 180 feet. TABLE NO. 2.

Day of Month	Beginning	Ending	Max. in 5 min. in Inches	Beginning	Max. in 10 min. in Inches	Beginning	Max. in 1 hour in Inches	Beginning	Am't of Rain or Melted Snow in Inches	Depth of Snow in Inches	General Direction of Wind	Miles per hour	Max. Velocity of Wind,	Average Temperature	Barometer	Humidity	Remarks
1	1.30 a m	6.30 a m							.25	2.5							
"	6.30 a m	3.32 p m	.03	2.02 p m	.06	1.57 p m	.23	1.32 p m	.78		S W	35		35.2	29.42	96	
2	4.00 p m	5.45 p m							.025	.25	S W	30		17.0	29.57	87	
3											S W	20		21.5	29.97	76	
4											N W	8		9.5	30.36	76	
5	5.15 p m	12 night							.25	2.50	N E	5		14.0	30.36	85	
6	12 night	6.00 a m							.35	3.50							
"	6.00 a m	9.00 a m							.01		N W	15		33.7	29.82	90	
7											W	20		22.5	30.07	79	
8											N W	15		7.5	30.36	71	
9											N W	15		15.2	30.61	73	
10											S W	15		18.2	30.53	80	
11											S E	8		32.2	30.37	88	
12											N W	8		30.2	30.50	82	
13	10.00 a m	12.00 p m							.10		N W	10		35.0	30.27	96	
14	12.00 p m	2.00 a m							.01								
"	8.25 a m	12.00 p m							.13		S E	15		39.5	29.89	98	
15	12.00 p m	1.45 a m							.02								
"	7.30 a m	2.55 p m							.37		S W	30		47.2	29.24	93	
16											S W	30		32.5	29.61	80	
17											W	20		27.5	29.90	81	
18	5.00 a m	11.00 a m							.45	4.5							
"	11.00 a m	8.25 p m	.03	3.15 p m	.05	3.15 p m	.20	2.25 p m	.75		N W	15		26.5	30.22	81	
19											N E	20		33.0	29.81	99	
20											N W	20		27.7	29.72	86	
21											S W	12		28.7	29.98	84	
22											N W	8		26.7	29.85	82	
23	11.00 a m	7.00 p m							.025	.25	S	5		24.0	29.81	90	
24											N W	10		23.7	30.17	80	
25	9.45 p m	12.00 p m							.10	1.00	S E	12		28.0	30.23	84	
26	3.00 a m	4.30 p m							.37		S E	35		38.2	29.71	92	
27											N W	15		34.2	29.64	83	
28											N W	30		21.7	29.90	79	
29											N W	20		25.7	30.07	81	
	Total...								3.99	14.50				Av. 26.8	Av. 29.9	Av. 84.3	

* Too small to be measured.
Depth of 10 inches snow averages 1 inch rain.

MONTHLY REPORT OF PRECIPITATION (Rain and Melted Snow)

As observed at Newark Public High School, by Prof. William Wiener, with U. S. Gov. Rain Gauge.

MARCH, 1908. Elevation of gauge above sea level, 180 feet. TABLE NO. 3.

Day of Month	Beginning	Ending	Max. in 5 min. In Inches	Beginning	Max. in 10 min. In Inches	Beginning	Max. in 1 hour In Inches	Beginning	Am't of Rain or Melted Snow In Inches	Depth of Snow In Inches	General Direction of Wind	Max. Velocity of Wind, Miles per hour	Average Temperature	Barometer	Humidity	Remarks
1	12 night	12.00 p m							.055	.25	E	20	25.0	30.20	92	
2	12 night	9.00 p m							.15		S W	15	35.0	29.95	98	
3											N W	15	33.2	30.20	82	
4											N W	12	30.0	30.34	80	
5											S E	8	30.0	30.28	82	
6	3.15 a m	1.10 p m							.275	2.75	S E	10	32.5	30.01	100	
7											S W	5	39.0	29.92	85	
8	1.00 p m	12.00 p m							.20		N W	6	38.5	30.22	90	
9	12 night	10.05 a m							.17		N W	15	32.5	30.20	86	
10											W	10	32.0	30.40	82	
11											S W	12	45.7	30.06	85	
12											N W	20	46.7	29.88	86	
13											S E	30	47.2	29.91	86	
14											N W	6	49.5	29.82	88	
15	2.00 p m	5.30 p m							.17		S W	35	47.5	29.68	93	
16											N W	30	39.5	29.76	85	
17											S	12	34.2	29.90	84	
18	11.30 a m	12 night			.03	1.35 p m	.17	1.15 p m	.48		N E	20	33.7	29.97	94	
19	12 night	6.30 a m	.07	4.15 a m	.10	4.10 a m	.11	4.10 a m	.33		N W	30	38.7	29.87	88	
20											N W	20	30.0	30.16	82	
21											N W	12	34.7	30.21	83	
22											S W	20	43.2	30.12	86	
23	10.00 p m	11.10 p m							.05		S E	15	47.0	29.76	94	
24											S W	20	49.5	29.68	87	
25											S W	20	36.5	30.21	82	
26											S W	25	55.0	30.17	84	
27											S W	20	62.7	30.02	85	
28											S W	2	59.2	29.90	90	
29	12.00 p m	4.30 p m							.212		N W	30	47.7	29.89	94	
30											S W	15	44.2	30.23	83	
31	10.00 a m	5.45 p m							.05		S E	12	44.2	29.97	91	
	Total..								2.142	3.00			Av. 40.7	Av. 30.02	Av. 87.3	

* Too small to be measured.
Depth of 10 inches snow averages 1 inch rain.

MONTHLY REPORT OF PRECIPITATION (Rain and Melted Snow)

As observed at Newark Public High School, by Prof. William Wiener, with U. S. Gov. Rain Gauge.

APRIL, 1908. Elevation of gauge above sea level, 180 feet. TABLE NO. 4.

Day of Month	Beginning	Ending	Max. in 5 min. in Inches	Beginning	Max. in 10 min. in Inches	Beginning	Max. in 1 hour in Inches	Beginning	Amt. of Rain or Melted Snow in Inches	Depth of Snow in Inches	General Direction of Wind	Max. Velocity of Wind, Miles per hour	Average Temperature	Barometer	Humidity	Remarks
1											S E	12	45.2	29.97	84	
2	12.30 a m	5.30 a m							.20		N W	35	40.7	29.61	84	
3											N W	30	33.0	29.84	80	
4											N W	30	33.2	30.05	78	
5	5.30 p m	12 night							.15		S W	15	38.5	30.21	90	
6											S W	19	54.7	30.00	85	
7											S W	10	59.0	30.07	86	
8	10.15 a m	4.30 p m							.48		N W	30	47.5	29.95	90	
9	1.15 p m	3.00 p m							.01		N W	20	46.9	30.04	84	
10	1.15 p m	12 night							.05		S W	12	47.0	30.01	98	
11	12.00 p m	8.00 a m							.05							
"	11.00 a m	12.30 a m							.04		N W	40	49.7	29.63	89	
12											N W	35	44.5	29.97	83	
13											N W	30	47.7	30.00	82	
14											W	15	41.7	30.36	83	
15	10.30 a m	9.15 p m							.12		S W	20	51.7	30.03	96	
16											N W	12	41.7	30.28	80	
17											S W	10	39.0	30.34	81	
18	5.30 p m	12.00 p m							.05		S W	3	52.5	29.93	91	
19	10.30 a m	12.45 p m							.11		N W	10	50.5	29.55	84	
20											S W	30	48.2	29.63	84	
21											W	20	45.0	29.89	79	
22											S W	30	58.7	29.93	82	
23											S W	12	66.5	29.78	84	
24									*		N E	3	58.2	29.86	85	
25									*		S E	3	60.7	29.83	85	
26											S E	10	68.5	29.82	86	
27	Showers								.01		S E	4	60.2	29.70	85	
28											N W	12	65.2	29.65	85	
29											S W	20	60.0	29.83	82	
30	3.00 p m	12.00 p m							1.00		S E	30	54.2	29.61	94	Gauge blew down.
	Total...								2.27				Av. 50.3	Av. 29.91	Av. 85.1	

* Too small to be measured.
Depth of 10 inches snow averages 1 inch rain.

MONTHLY REPORT OF PRECIPITATION (Rain and Melted Snow)

As observed at Newark Public High School, by Prof. William Wiener, with U. S. Gov. Rain Gauge.

MARCH, 1908. Elevation of gauge above sea level, 180 feet. TABLE NO. 3.

Day of Month	Beginning	Ending	Max. in 5 min. In Inches	Beginning	Max. in 10 min. In Inches	Beginning	Max. in 1 hour In Inches	Beginning	Am't of Rain or Melted Snow In inches	Depth of Snow In Inches	General Direction of Wind	Max. Velocity of Wind, Miles per hour	Average Temperature	Barometer	Humidity	Remarks
1	12 night	12.00 p m							.055	.25	E	20	25.0	30.20	92	
2	12 night	9.00 p m							.15		S W	15	35.0	29.95	98	
3											N W	15	33.2	30.20	82	
4											N W	12	30.0	30.34	80	
5											S E	8	30.0	30.28	82	
6	3.15 a m	1.10 p m							.275	2.75	S E	10	32.5	30.01	100	
7											S W	5	39.0	29.92	85	
8	4.00 p m	12.00 p m							.20		N W	6	38.5	30.22	90	
9	12 night	10.05 a m							.17		N W	15	32.5	30.20	86	
10											W	10	32.0	30.40	82	
11											S W	12	45.7	30.08	85	
12											N W	20	46.7	29.88	86	
13											S E	30	47.2	29.91	86	
14											N W	6	49.5	29.83	88	
15	2.00 p m	5.30 p m							.17		S W	35	47.5	29.68	93	
16											N W	30	39.5	29.76	85	
17											S	12	34.2	29.90	84	
18	11.30 a m	12 night			.03	1.35 p m	.17	1.15 p m	.48		N E	20	33.7	29.97	94	
19	12 night	6.30 a m	.07	4.15 a m	.10	4.10 a m	.11	4.10 a m	.33		N W	30	38.7	29.87	88	
20											N W	20	30.0	30.16	82	
21											N W	12	34.7	30.21	83	
22											S W	20	43.2	30.12	86	
23	10.00 p m	11.10 p m							.05		S E	15	47.0	29.76	94	
24											S W	20	49.5	29.68	87	
25											S W	20	36.5	30.21	82	
26											S W	25	55.0	30.17	84	
27											S W	20	62.7	30.02	85	
28											S W	2	59.2	29.90	90	
29	12.00 p m	4.30 p m							.212		N W	30	47.7	29.89	94	
30											S W	15	44.2	30.23	83	
31	10.00 a m	5.45 p m							.05		S E	12	44.2	29.97	91	
	Total...								2.142	3.00			Av. 40.7	Av. 30.02	Av. 87.3	

* Too small to be measured.
Depth of 10 inches snow averages 1 inch rain.

MONTHLY REPORT OF PRECIPITATION (Rain and Melted Snow)

As observed at Newark Public High School, by Prof. William Wiener, with U. S. Gov. Rain Gauge.

JUNE, 1908. **Elevation of gauge above sea level, 180 feet.** **TABLE NO. 6**

Day of Month	Beginning	Ending	Max. in 5 min. in Inches	Beginning	Max. in 10 min. in Inches	Beginning	Max. in 1 hour in Inches	Beginning	Am't of Rain or Melted Snow in Inches	Depth of Snow in Inches	General Direction of Wind	Max. Velocity of Wind Miles per hour	Average Temperature	Barometer	Humidity	Remarks
1											N W	10	63.0	29.85	83	
2											N W	15	66.5	29.96	82	
3											S W	10	62.7	30.06	81	
4											S W	12	67.7	30.00	82	
5											N E	10	65.5	30.15	82	
6											E	6	62.7	30.28	83	
7											S W	8	69.7	30.13	82	
8											S W	12	73.5	29.99	83	
9											S W	10	73.5	29.84	84	
10											N W	8	75.5	29.79	84	
11	11.30 a m	Showers							*		N E	10	66.7	29.92	83	
12											N E	8	69.2	30.05	83	
13											S W	5	71.2	30.06	84	
14											S W	12	79.0	29.97	86	
15	9.40 a m	10.20 a m			.75	1.55 p m	1.80	1.15 p m	.06							
"	11.20 a m	11.30 a m							.03							
"	1.15 p m	12 night							3.83		S E	30	67.0	29.87	94	
16	12 night	5.30 a m							.03		N W	10	63.0	29.96	83	
17											S E	8	63.5	30.17	83	
18											S E	12	64.2	30.16	83	
19											S W	10	74.7	30.00	84	
20											S W	6	79.5	29.87	83	
21											S W	15	81.7	29.97	88	
22											S E	10	80.2	29.93	87	
23											N E	8	75.0	29.98	86	
24	5.50 p m	7.10 p m							.22		S W	35	77.5	29.87	86	
25											S W	15	73.2	29.92	84	
26											N E	10	69.7	30.10	82	
27											N E	10	73.0	30.08	82	
28											S W	12	76.2	30.05	84	
29											S W	30	79.5	29.87	85	
30											N W	10	77.7	29.98	84	
	Total---								4.17				Av. 71.4	Av. 29.99	Av. 80.3	

* Too small to be measured.
Depth of 10 inches snow averages 1 inch rain.

MONTHLY REPORT OF PRECIPITATION (Rain and Melted Snow)

As observed at Newark Public High School, by Prof. William Wiener, with U. S. Gov. Rain Gauge.

MAY, 1908. Elevation of gauge above sea level, 180 feet. TABLE NO. 5.

Day of Month	Beginning	Ending	Max. in 5 min In Inches	Beginning	Max. in 10 min. In Inches	Beginning	Max. in 1 hour in Inches	Beginning	Am't of Rain or Melted Snow In Inches	Depth of Snow in Inches	General Direction of Wind	Max. Velocity of Wind, Miles per hour	Average Temperature	Barometer	Humidity	Remarks
1											S W	30	43.7	29.63	83	
2	Showers	at interv	als.						*		S W	12	48.7	29.69	83	
3											N W	12	55.2	29.79	78	
4											N W	6	51.2	29.94	82	
5											N E	2	56.0	30.03	83	
6	7.00 p m	12.00 p m	.15	7.25 p m	.30	7.25 p m	.36	7.25 p m	.04		N E	10	49.2	30.00	94	
7	4.30 a m	12.00 p m	.05	9.25 a m	.13	9.25 a m	.70	8.55 a m	3.23		N E	35	46.0	29.78	100	
8	12 night	3.00 a m							.03							
"	3.30 p m	4.45 p m				3.30 p m	.10	3.30 p m	.10							
"	7.15 p m	7.45 p m	.15	7.25 p m	.30	7.25 p m	.35	7.15 p m	.35		N E	20	48.7	29.59	90	
9									*		S W	20	50.0	29.47	87	
10											N W	20	48.5	29.67	82	
11											S W	20	66.0	29.83	83	
12											S W	20	72.2	29.82	84	
13											S W	12	74.2	29.87	84	
14	3.30 a m	4.00 a m						3.30 a m	.03							
"	5.30 p m	12.00 p m							.16		N E	20	57.5	30.10	90	
15	12 night	5.00 p m							.33		N E	10	50.2	30.19	95	
16											S W	6	55.7	30.12	86	
17											S W	8	67.2	30.00	86	
18											S E	10	61.7	29.96	83	
19									Sh'rs		S E	10	61.2	29.93	86	
20	12.45 a m	12.00 p m	.05	1.35 a m	.08	1.35 a m	.26	12.45 a m	.77		N E	8	57.2	29.89	100	
21	12 night	12 noon	.08	6.00 a m	.18	6.00 a m	.27	5.30 a m	.51		S E	15	61.0	30.05	96	
22	12 night	12 noon	.42	12.28 a m	.53	12.27 a m	.66	12.25 a m	1.63		S E	10	62.5	30.14	93	
23											N	4	41.2	30.13	86	
24											N W	8	73.7	30.10	85	
25											N	6	65.5	30.12	85	
26	10.30 p m	11.20 p m					.30	10.30 p m	.30		S W	10	74.5	29.91	88	
27											S W	12	77.7	29.81	89	
28											S E	10	64.2	29.99	86	
29									Sh'rs		S E	4	64.5	29.97	86	
30	8.00 a m	7.00 p m	.09	4.05 p m	.20	4.05 p m	.60	4.05 p m	1.53		N E	15	67.0	29.68	100	
31									*		S W	10	71.7	29.73	89	
	Total....								9.01				Av. 59.4	Av. 29.90	Av. 87.7	

* Too small to be measured.

MONTHLY REPORT OF PRECIPITATION (Rain and Melted Snow)
As observed at Newark Public High School, by Prof. William Wiener, with U. S. Gov. Rain Gauge.
AUGUST, 1908. **Elevation of gauge above sea level, 180 feet.** **TABLE NO. 8.**

Day of Month	Beginning	Ending	Max. in 5 min. In Inches	Beginning	Max. in 10 min. In Inches	Beginning	Max. in 1 hour In Inches	Beginning	Am't of Rain or Melted Snow In Inches	Depth of Snow In Inches	General Direction of Wind	Max. Velocity of Wind. Miles per hour	Average Temperature	Barometer	Humidity	Remarks
1											N W	20	70.5	29.79	80	
2											S W	15	74.5	29.87	83	
3											S E	10	74.0	29.97	84	
4											S E	10	80.5	29.87	85	
5	5.45 p m	9.45 p m	.13	6.30 p m	.28	6.30 p m	.42	6.25 p m	.53		S E	15	79.7	29.75	91	
6	2.20 p m	3.15 p m	.08	2.25 p m	.05	2.25 p m	.16	2.20 p m	.16		S W	10	76.7	29.78	83	
7	11.20 a m	11.30 a m							*							
"	1.25 p m	2.20 p m	.10	1.40 p m	.13	1.35 p m	.16	1.25 p m	.16		S W	12	70.5	29.74	87	
8											S W	6	72.5	29.75	83	
9	6.50 a m	11.15 a m							.02		S E	8	69.7	29.76	84	
10											S W	8	74.7	29.84	82	
11	2.15 p m	4.20 p m	.03	2.45 p m	.05	2.40 p m	.10	2.40 p m	.19		S W	10	71.2	29.95	83	
12											S W	6	75.5	30.04	83	
13											S W	15	81.2	29.97	86	
14											S W	10	79.7	29.99	85	
15											N E	8	76.7	30.06	83	
16	11.30 p m	11.55 p m							*		N E	15	72.7	30.16	83	
17	3.15 a m	12 noon							.04		N W	12	73.7	30.00	88	
18											N W	15	73.5	29.83	82	
19											S W	15	74.0	29.74	81	
20											N W	12	64.0	29.87	79	
21											S E	15	69.5	30.05	80	
22	2.30 a m	4.10 a m							.10							
"	7.30 a m	12.55 p m	.11	10.25 a m	.21	11.20 a m	.45	10.10 a m	1.04		N W	12	73.5	29.89	83	
23											N W	12	68.7	29.94	82	
24											N W	8	66.5	30.02	81	
25	5.55 p m	12.00 p m	.08	6.00 p m	.12	6.10 p m	.45	6.00 p m	1.45		N E	15	65.0	30.14	87	
26	12.00 a m	9.25 p m	.10	10.15 a m	.45	10.10 a m	1.02	10.10 a m	3.99		N E	15	55.2	30.06	100	
27	2.20 a m	4.40 a m							.04							
"	8.00 a m	10.50 a m	.04	4.35 p m	.07	4.35 p m			.04		N E	12	59.7	30.09	85	
28											N E	10	62.2	30.13	80	
29											S E	8	62.0	30.12	80	
30											S W	5	68.5	30.14	83	
31											S E	8	69.7	30.17	84	
	Total...								7.74				Av. 71.1	Av. 29.89	Av. 83.9	

* Too small to be measured.
Depth of 10 inches snow averages 1 inch rain.

MONTHLY REPORT OF PRECIPITATION (Rain and Melted Snow)

As observed at Newark Public High School, by Prof. William Wiener, with U. S. Gov. Rain Gauge.

SEPTEMBER, 1908. Elevation of gauge above sea level, 180 feet. TABLE NO. 9.

Day of Month	Beginning	Ending	Max. in 5 min. In Inches	Beginning	Max. in 10 min. In Inches	Beginning	Max. in 1 hour in Inches	Beginning	Am't of Rain or Melted Snow In Inches	Depth of Snow in Inches	General Direction of Wind	Max. Velocity of Wind, Miles per hour	Average Temperature	Barometer	Humidity	Remarks
1											S E	10	71.5	30.06	83	
2											S W	20	71.5	29.81	81	
3											S W	15	62.5	30.01	78	
4											N W	12	64.7	30.12	81	
5											S W	15	66.0	30.03	81	
6	2.00 a m	1.45 p m							.69							
"	9.45 p m	11.10 p m	.18	9.58 p m	.13	9.58 p m	.20	9.58 p m	.30		S E	8	64.2	29.80	91	
7											N W	10	65.5	29.96	82	
8											S W	12	64.7	30.19	83	
9											S W	15	66.7	30.21	80	
10											S W	12	71.2	30.13	83	
11											S W	10	71.2	30.01	82	
12											S E	6	69.2	29.95	83	
13											S E	8	69.0	29.87	86	
14											N E	20	66.0	29.99	83	
15											S E	10	58.7	30.24	80	
16											N	15	61.7	30.08	78	
17											S W	15	67.7	29.87	81	
18											S W	12	69.5	29.85	82	
19											N W	10	73.0	29.92	82	
20	About 9	or 9.30 a m							*		S E	12	60.7	30.20	78	
21											S W	15	62.2	30.13	81	
22											S W	15	65.5	30.00	83	
23											S E	8	64.0	29.99	84	
24											S W	8	68.5	30.03	86	
25											S W	30	70.7	30.13	85	
26											N W	5	68.0	30.15	81	
27											S E	10	68.0	30.10	83	
28	7.00 a m	7.30 a m							*		S E	30	71.0	29.90	90	
"	3.30 p m	4.30 p m							Shw'r							
"	11.00 p m	12 night	.09	11.25 p m	.14	11.25 p m	.35	11.00 p m	.35		S E	30	71.0	29.90	90	
29	12 night	3.30 a m							.35		N W	20	57.7	29.98	75	
30											N W	10	54.0	30.15	72	
	Total...								1.69				Av. 66.1	Av 30.02	Av. 81.0	

* Too small to be measured.
Depth of 10 inches snow averages 1 inch rain.

MONTHLY REPORT OF PRECIPITATION (Rain and Melted Snow)

As observed at Newark Public High School, by Prof. William Wiener, with U. S. Gov. Rain Gauge.

AUGUST, 1908. Elevation of gauge above sea level, 180 feet. TABLE NO. 8.

Day of Month	Beginning	Ending	Max. in 5 min. In Inches	Beginning	Max. in 10 min. In Inches	Beginning	Max. in 1 hour in Inches	Beginning	Am't of Rain or Melted Snow in Inches	Depth of Snow in Inches	General Direction of Wind	Max. Velocity of Wind. Miles per hour	Average Temperature	Barometer	Humidity	Remarks
1											N W	20	70.5	29.79	80	
2											S W	15	74.5	29.87	83	
3											S E	10	74.0	29.97	84	
4											S E	10	80.5	29.87	85	
5	5.45 p m	9.45 p m	.13	6.30 p m	.23	6.30 p m	.42	6.25 p m	.53		S E	15	79.7	29.75	91	
6	2.20 p m	3.15 p m	.08	2.25 p m	.05	2.25 p m	.16	2.20 p m	.16		S W	10	76.7	29.78	83	
7	11.20 a m	11.30 a m							*							
"	1.25 p m	2.20 p m	.10	1.40 p m	.13	1.35 p m	.16	1.25 p m	.16		S W	12	70.5	29.74	87	
8											S W	6	72.5	29.75	83	
9	6.50 a m	11.15 a m							.02		S E	8	69.7	29.76	84	
10											S W	8	74.7	29.84	82	
11	2.15 p m	4.20 p m	.08	2.45 p m	.05	2.40 p m	.10	2.40 p m	.19		S W	10	71.2	29.95	83	
12											S W	6	75.5	30.04	83	
13											S W	15	81.2	29.97	86	
14											S W	10	70.7	29.99	85	
15											N E	8	76.7	30.06	83	
16	11.30 p m	11.55 p m							*		N E	15	72.7	30.16	83	
17	3.15 a m	12 noon							.04		N W	12	73.7	30.00	88	
18											N W	15	73.5	29.83	82	
19											S W	15	74.0	29.74	81	
20											N W	12	64.0	29.87	79	
21											S E	15	69.5	30.05	80	
22	2.30 a m	4.10 a m							.10							
"	7.30 a m	12.55 p m	.11	10.25 a m	.21	11.20 a m	.45	10.10 a m	1.04		N W	12	73.5	29.89	83	
23											N W	12	68.7	29.94	82	
24											N W	8	66.5	30.02	81	
25	5.55 p m	12.00 p m	.08	6.00 p m	.12	6.10 p m	.45	6.00 p m	1.45		N E	15	65.0	30.14	87	
26	12.00 a m	9.25 p m	.10	10.15 a m	.45	10.10 a m	1.02	10.10 a m	3.99		N E	15	55.2	30.06	100	
27	2.20 a m	4.40 a m							.04							
"	8.00 a m	10.50 a m	.04	4.35 p m	.07	4.35 p m			.04		N E	12	59.7	30.09	85	
28											N E	10	62.2	30.13	80	
29											S E	8	62.0	30.12	80	
30											S W	5	68.5	30.14	89	
31											S E	8	69.7	30.17	84	
	Total...								7.74				Av. 71.1	Av. 29.89	Av. 83.9	

* Too small to be measured.
Depth of 10 inches snow averages 1 inch rain.

MONTHLY REPORT OF PRECIPITATION (Rain and Melted Snow)

As observed at Newark Public High School, by Prof. William Wiener, with U. S. Gov. Rain Gauge.

NOVEMBER, 1908. Elevation of gauge above sea level, 180 feet. TABLE NO. 11.

Day of Month	Beginning	Ending	Max. in 5 min. In Inches	Beginning	Max. in 10 min. In Inches	Beginning	Max. in 1 hour In Inches	Beginning	Am't of Rain or Melted Snow in Inches	Depth of Snow in Inches	General Direction of Wind	Max. Velocity of Wind, Miles per hour	Average Temperature	Barometer	Humidity	Remarks
1											N W	15	39.2	30.19	70	
2											N W	8	40.2	30.21	70	
3											S W	10	48.7	29.96	72	
4											N W	25	40.0	29.61	73	
5											N W	15	37.5	29.78	71	
6											S W	10	40.5	29.74	74	
7											W	5	47.2	29.61	77	
8											S W	6	46.5	29.61	80	
9											S W	5	48.7	29.85	78	
10											N W	4	51.2	29.94	85	
11											S E	6	52.0	29.80	95	
12											N W	8	38.7	30.01	69	
13											N W	20	35.7	30.09	67	
14	3.30 p m	11.30 p m			.03	4.50 p m	.1	4.15 p m	.20	1.00	S W	12	32.5	30.07	86	
15											S W	-	31.7	29.98	64	
16											S W	8	35.5	29.91	68	
17											S W	12	34.0	29.92	71	
18	8.00 a m	11.00 a m							.03		S W	5	41.0	29.66	85	
19											S E	6	43.2	29.89	83	
20											N W	8	44.0	30.04	75	
21											S W	4	38.5	30.29	69	
22											S W	5	39.5	30.27	80	
23											S W	5	46.7	30.19	87	
24											N E	6	50.2	30.11	94	
25	11.30 p m	12 night							drizle		E	7	53.7	30.16	99	
26	12 night	4.00 a m							.02		S E	15	58.2	30.07	89	
27											S W	15	49.7	30.10	65	
28											W	6	45.5	30.15	68	
29	About mi dnight.								*		S W	8	44.7	30.03	64	
30											S W	5	52.0	29.93	89	
Total...									.35	1.00			Av. 43.5	Av. 29.997	Av. 77.2	

* Too small to be measured.
Depth of 10 inches snow averages 1 inch rain.

MONTHLY REPORT OF PRECIPITATION (Rain and Melted Snow)

As observed at Newark Public High School, by Prof. William Wiener, with U. S. Gov. Rain Gauge.

OCTOBER, 908. Elevation of gauge above sea level, 180 feet. TABLE NO. 10.

Day of Month	Beginning	Ending	Max. in 5 min. in Inches	Beginning	Max. in 10 min. in Inches	Beginning	Max. in 1 hour in Inches	Beginning	Am't of Rain or Melted Snow in Inches	Depth of Snow in Inches	General Direction of Wind	Max. Velocity of Wind, Miles per hour	Average Temperature	Barometer	Humidity	Remarks
1											S E	12	54.5	29.96	79	
2	12.50 a m	2.05 a m							.09		N W	40	48.5	30.03	77	
3											N W	12	52.7	30.21	79	
4											N W	8	58.5	30.20	78	
5											N W	8	55.2	30.22	78	
6											N W	6	52.2*	30.20	74	
7											N W	6	58.0	30.12	80	
8											S W	5	63.0	30.02	80	
9	A few drops about 8 p m										N W	8	61.5	29.98	78	
10	6.35 p m	12.00 p m							.11		N W	5	57.7	30.12	85	
11	12.00 a m	3.00 a m							.02		S W	20	67.2	29.98	77	
12											N W	30	48.0	30.32	72	
13											S E	8	48.7	30.37	73	
14											S W	6	55.7	30.11	73	
15											S W	5	62.2	29.98	74	
16											N W	6	68.2	30.02	81	
17											N W	6	68.5	30.08	81	
18											S W	8	66.0	30.06	78	
19											N E	20	58.0	29.99	79	
20											N E	10	48.2	30.25	72	
21											N E	10	46.5	30.33	69	
22	2.30 p m	6.30 p m							.02		N E	8	50.5	30.34	71	
23	Trace of rain at different hours.										N E	6	58.0	30.24	76	
24	11.00 p m	12 night							.10		S E	5	64.7	30.06	79	
25	12.00 a m	4.25 a m							.35							
"	9.45 a m	11.00 a m							.11							
"	3.50 p m	4.00 p m							.01							
"	4.20 p m	6.15 p m	.03	11.15 a m	.05	11.10 a m	.10	11.00 p m	.20		S E	6	66.0	30.00	88	
26	9.05 a m	9.20 a m							.03							
"	4.55 p m		.11	9.45 a m	.01	3.50 a m	.20	4.20 p m	.01		S E	7	63.2	29.88	88	
27	1.38 p m	8.50 p m							.60		S E	4	61.2	29.92	86	
28	5.05 p m	12 night	.03	6.50 p m	.05	6.50 p m	.10	6.15 p m	.40		S E	6	58.5	29.80	97	
29	12 night	3.50 p m							.05		N W	15	53.2	29.68	92	
30											N W	20	46.2	29.72	76	
31											N W	20	39.0	30.03	72	
	Total---								2.10				Av. 56.7	Av. 30.07	Av. 75.5	

* Too small to be measured.
Depth of 10 inches snow averages 1 inch rain

	of Soil	Contractor	Remarks	Date
Warwick S	ay	James A. Christie		Mar. 30
Elizabeth A		Miele & Bruno		April 27
South Thir	ing	D'Amato & Stefanelli		April 27
East Sylvar		J. H. Sammis	House sewage only	June 29
Lafayette		Miele & Bruno		May 25
Market St.		Valente & Angioulí		June 29
Jelliff Ave.	rest clay	Valente & Angioulí		May 25
South Eigh		D'Amato & Stefanelli		May 25
			12" and 10" pipes for house sewage only	
Lockwood			Sulphur joints; 1 sump at $170.00	
	ater	J. Valente & Co.	60 ft. of 6" iron pipe at $1.75	Aug. 31
Foundry S		J. Valente & Co.	Sulphur joints; house sewage only	July 27
Waydell St		J. Valente & Co.	Sulphur joints; house sewage only	July 27
Clifton Av		D'Amato & Stefanelli	House sewage only	Aug. 31
Grant Ave				
Sheridar		D'Amato & Stefanelli		Sept. 28
Edmonds		D'Amato & Stefanelli	House sewage only	Sept. 28
Belmont Av				
	oil	D'Amato & Stefanelli		Sept. 28
Geneva St.		James A. Christie	House sewage only	Sept. 28
South Sixt		Miele & Bruno		Dec. 28
Meadow Br				
North Ni				
Delavan				
North Ter				
Third Av			Pipe sewer with sulphur joints	
North Tw			Pipe sewer for house sewage only	
Fourth A	d soil		Concrete sewer for storm water only	
North Th		F. M. Stillman Co.	Concrete sewer on bottom boards	Dec. 28
Ridgewood	nd	J. Valente & Co.	Not completed	Dec. 28
Nutria St.			18" pipe laid in old brick sewer	
Nutria All	nd	Harrison Construction Co.	Not completed	Dec. 28
Meadow Br				
Fredonia				
Elwood A				
Delavan				
Chester A				
Berkeley				
North Six				
North Sev				
North Eig				
North Ni			1 pumping station	
North Ter			House sewage only	
North Ele	ater, rock	Wm. J. McCloud & Co.	Not completed; commenced in 1907	Aug. 31
Rose Ave				
Meadow Br				
Delavan				
First Av				
Second A				
Third Av				
Peck Ave				
North Ter				
North Ele				
North Ele				
North Tw			Not completed	
North Th	y, rock	James A. Christie	House sewage only	Dec. 28
Bloomfiel				

	of Soil	Contractor	Remarks	Date
Warwick S	ay	James A. Christie		Mar. 30
Elizabeth A		Miele & Bruno		April 27
South Thir	ing	D'Amato & Stefanelli		April 27
East Sylvar		J. H. Sammis	House sewage only	June 29
Lafayette		Miele & Bruno		May 25
Market St.		Valente & Angioulli		June 29
Jelliff Ave.	rest clay	Valente & Angioulli		May 25
South Eigl		D'Amato & Stefanelli		May 25
			12" and 10" pipes for house sewage only	
Lockwood			Sulphur joints; 1 sump at $170.00	
	ater	J. Valente & Co.	60 ft. of 6" iron pipe at $1.75	Aug. 31
Foundry S		J. Valente & Co.	Sulphur joints; house sewage only	July 27
Waydell St		J. Valente & Co.	Sulphur joints; house sewage only	July 27
Clifton Av		D'Amato & Stefanelli	House sewage only	Aug. 31
Grant Ave				
Sheridar		D'Amato & Stefanelli		Sept. 28
Edmonds		D'Amato & Stefanelli	House sewage only	Sept. 28
Belmont A				
	oil	D'Amato & Stefanelli		Sept. 28
Geneva St.		James A. Christie	House sewage only	Sept. 28
South Sixt		Miele & Bruno		Dec. 28
Meadow Br				
North Ni				
Delavan				
North Ter				
Third Av			Pipe sewer with sulphur joints	
North Tw			Pipe sewer for house sewage only	
Fourth A	d soil		Concrete sewer for storm water only	
North Th		F. M. Stillman Co.	Concrete sewer on bottom boards	Dec. 28
Ridgewood	nd	J. Valente & Co.	Not completed	Dec. 28
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Meadow Br				
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Delavan				
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North Six				
North Sev				
North Elg				
North Ni			1 pumping station	
North Ter			House sewage only	
North El	ater, rock	Wm. J. McCloud & Co.	Not completed; commenced in 1907	Aug. 31
Rose Ave				
Meadow Br				
Delavan				
First Av				
Second A				
Third Av				
Peck Ave				
North Ter				
North El				
North El				
North Tw			Not completed	
North Th	ay, rock	James A. Christie	House sewage only	Dec. 28
Bloomfiel				

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